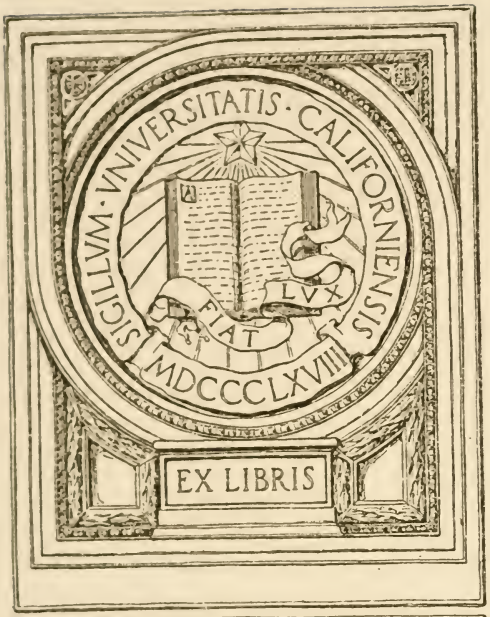
THE PALL MALL
MILITARY
SERIES

THE TRANSFORMATIONS OF WAR

COMMANDANT J. COLIN


SIGILLVM · VNIVERSITATIS · CALIFORNIENSIS
LVX
FIAT
MDCCCLXVIII
EX LIBRIS

THE TRANSFORMATIONS OF WAR

THE TRANSFORMATIONS OF WAR

BY

COMMANDANT J. COLIN

OF THE FRENCH WAR SCHOOL

TRANSLATED BY

BREVET-MAJOR L. H. R. POPE-HENNESSY

D.S.O., *p.s.c.*

52ND LIGHT INFANTRY

LONDON

HUGH REES, LTD.

5 REGENT STREET, PALL MALL

1912

(ALL RIGHTS RESERVED)

U102
C71

PRINTED BY
HAZELL, WATSON AND VINEY, LD.,
LONDON AND AYLESBURY.

UNIV. OF
CALIFORNIA

THIS TRANSLATION IS

DEDICATED TO

PROFESSOR SPENSER WILKINSON

CHICHELE PROFESSOR OF MILITARY HISTORY
AT THE UNIVERSITY OF OXFORD

AS A HUMBLE TRIBUTE OF ADMIRATION TO HIS LONG SUSTAINED EFFORTS TO LEAD HIS COUNTRYMEN TO APPRECIATE THE FACTS OF WAR AND THE NEED OF TRULY NATIONAL PREPARATION FOR WAR

304716

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

http://www.archive.org/details/transformationof00colirich

CONTENTS

PAGE

INTRODUCTION xiii

PART I

THE COMBAT

CHAPTER I

BEFORE THE INTRODUCTION OF RIFLED FIREARMS

1. The Combat in Antiquity 3
2. The Preponderating Rôle of Cavalry . . . 9
3. The Introduction of Firearms 12
4. Linear Tactics 16
5. French Tactics in the Eighteenth Century . . 19
6. The Combat from 1815 to 1866 27

CHAPTER II

THE COMBAT IN MODERN WARS

1. Ideas on the Combat before 1870 32
2. The Combat in 1870–71 37
3. Tactics in Peace-time (1871–99) 41
4. The Transvaal and Manchuria:
   - (*a*) Artillery 46
   - (*b*) Infantry—the Attack 53
   - (*c*) Infantry—the Defence 61

CHAPTER III

THE MODERN COMBAT

PAGE

1. Preliminaries of the Modern Combat . . . 64
2. General Principles of the Combat 67
3. Fear 74
4. The Remedies for Fear 77
5. Groups 84
6. The Approach March and Artillery . . . 89
7. The Last Phase 91
8. Attack and Defence—the Encounter Fight . . 96

Conclusion 101

PART II

THE BATTLE

CHAPTER I

BEFORE NAPOLEON

1. The Battle in Old Times 105
2. The Eighteenth-century Battle 108
3. The Battles of the Revolution 113

CHAPTER II

NAPOLEON

1. The Napoleonic Battle :
   (*a*) The Flank Attack 117
   (*b*) Object of the Flank Attack 121
   (*c*) Particular Cases 125
   (*d*) Initial Dispositions 127
   (*e*) The Decision 131
   (*f*) Offensive and Defensive 133

CHAPTER III

THE BATTLE IN MODERN WARS

PAGE
1. Battle in the Nineteenth Century 136
2. Liao Yang 146
3. The Sha-ho 150
4. Mukden 154

CHAPTER IV

THE MODERN BATTLE

1. Cavalry in Battle 159
2. Battle in the Twentieth Century 164
3. The Results of Battle 173
4. The Duration of Engagements and Breaking Off the Fight 178
5. *Morale* in Battle 182

PART III

OPERATIONS

CHAPTER I

WAR IN FORMER DAYS

1. Operations and Battle 189
2. War in Ancient Times 193
3. Causes of the Transformations in War . . . 196
4. The Elements of Ancient War 200

CHAPTER II

MODERN WAR

PAGE
1. The Origins of Modern War 207
2. The Details of Modern War 214
3. The Character of Modern War 220

CHAPTER III

NAPOLEONIC WAR

1. The Principles of Napoleonic War: Force: Unity of Action 228
2. The Economy of Forces. 237
3. The Extension of Fronts. Assembly and Concentration 241
4. Speed and Secrecy 250
5. Grand Tactics 259
6. Exploration 269
7. Protection 274
8. The Offensive against a Single Enemy . . . 278
9. Defensive. Central Position 288

CHAPTER IV

WAR IN THE NINETEENTH CENTURY

1. Napoleon and German Doctrine 296
2. Moltke's March Strategy 303
3. Manœuvre in the Plans and Operations of Moltke . 310
4. Mobilisation and Concentration 317

CHAPTER V

WAR IN THE TWENTIETH CENTURY

PAGE

1. The New Conditions of War 322
2. The Application of Principles to Modern War . 331
3. The Offensive and the Defensive 335
4. War and Policy 341

Conclusion 347

Index 357

INTRODUCTION

It is often asked whether war is a *science* or an *art*, but war is necessarily both a science and an art. "Science seeks out laws, establishes and classifies facts; art selects, combines, and produces." There is a science of war which studies the means of action and elements of war, analyses the events of past wars, compares them, and deduces from them the relations of cause to effect, and which sometimes succeeds in formulating general laws. Turning to account the results arrived at by science, art, when the moment of action has arrived, chooses the methods which seem to suit the various special cases as they present themselves. And this process is but the application by the executant of his natural gifts and of the knowledge which he has *assimilated*. According to the circumstances of the case this knowledge plays a more or less considerable part, and consequently science finds in art a more or less direct application. It is sometimes believed that art can dispense with science, and sometimes that art may be reduced to the application of scientific conclusions. And so we arrive at the question which is meaningless in the terms in which it is posed: *i.e.* Is war an art? or a science?

Logically speaking it is both the one and the other, and though they are distinct, there is no example of their having been separated. War is almost always studied by professionals and that with a view to action. No one can determine to write on military science without passing straightway to practical conclusions. We shall try to do so, but without any assurance of being successful. The art of war has for its domain the operations of armies in the field to the exclusion of all accessory elements; the corresponding science has a similar object. It knows of arms but their effect, of means of transport but their output, and the conditions necessary for their military exploitation, etc. By far the most considerable part—the essential part—treats of operations properly so-called, of fights, marches, or the position of armies: it is based above all on an analysis and comparison of the facts of war, that is to say, on Military History.

An act of war, even the most apparently simple, is such a complex mixture of moral, intellectual, and material elements, that the clearest mind can draw from it nothing dependable, if it does not summon to its aid the long experience of history.

Of what nature are the teachings provided by Military History? To begin with, they are facts proper to serve as examples, but these are what signify least. Military History has a more serious aim when, after examining a short period, it describes with precision the methods of the fight. Let us go a step further: let us follow day by day the decisions of a great commander, the circum-

stances which called them into being, the results which they produced; let us seek in the correspondence of Frederick or Napoleon the traces of their intellectual labour, and alongside the direct teaching furnished by each operation we may build up a more interesting whole—composed of the system of principles and the procedure adopted by the commander, and so arrive at his doctrine and his method. When such results have been attained, the military historian may deal with a vast range of subjects; he may trace the transformations of some particular element throughout the ages, sometimes armament, sometimes the combat, and sometimes the doctrine of war of commanders. Embracing the whole of this evolution he may draw therefrom either philosophic conclusions, or practical suggestions. He clearly sees the significance of the most recent transformations in war, and these are those that concern him most. He has traced a curve from its origin and has determined the tangent at the point 1911.

It cannot too often be repeated that the phenomena of war are by nature and by reason of their material, intellectual, and moral elements so complicated that it is difficult to form an exact idea of them. They provoke endless discussions in which it is impossible to mark error down. History alone leads us to solid conclusions which nothing can shake, and whence convictions spring. Therefore in order to rough out a sketch of military science we shall ourselves have recourse to the historical method.

We shall see the physiognomy of the combat change with the character of the weapons in use. Then will come the turn of battle, the decisive act of war, of which the broad features are modified according to the manner of fighting. Finally, from the combat and the battle we shall pass to combined operations. The form and the character of such operations are determined by the combat and the battle, and it is through them that operations are brought under the influence of the progress effected in armament.

The successive forms of war in the past will in their evolution enable us to grasp what the combat, the battle, the war of our days may be. It will be easy to perceive general laws, that which remains constant in principle and application, as well as that which varies, and the meaning of the variation; conclusions indeed will impose themselves on us so clearly that we shall barely have to indicate them. In any case, we shall avoid presenting a treatise on military art, or giving counsel and precepts to men of the profession. We shall confine ourselves to showing what was and what is, letting facts speak for themselves. We shall also endeavour to avoid the pretentious metaphysical vocabulary that has been so much abused for the last twenty years, a vocabulary that runs the risk of warping the very spirit of war, in which everything should be simple and practical. By dint of seeking general and abstract principles we run the risk of not finding any that are applicable to particular and concrete cases.

PART I

THE COMBAT

CHAPTER I

BEFORE THE INTRODUCTION OF RIFLED FIREARMS

§ 1. THE COMBAT IN ANTIQUITY

Various diverse causes contribute in determining the manner of fighting and of preparing battle in any given epoch and among any given people. Some of these causes, and not the least important, are of a moral nature: such, for instance, are the passions which inspire the combatants, the qualities peculiar to each race, and varying political institutions; but, if we take into our purview the history of war as a whole during a long period, causes of this sort are found to differ from day to day, and to counterbalance and to neutralise one another. The great transformations in combat and in war, and their evolution, are due to the progress made in armament, or, more often, to the progress made in those material things which are utilised in the fight.

The invention of gunpowder has given missile weapons a place incomparably more important than in the past, though their rôle was far from insignificant in ancient times. We are tempted

to ignore this fact because the ancient historians do not like alluding to it; their preference is given to the warrior citizens who fought with spear and sword—they disdain the auxiliaries armed with bow or sling. Our attention being fixed on the phalanxes and cohorts, we are led to form an absolutely false idea of the ancient combat, and not to perceive the transition from it to the combat of the Middle Ages. In reality there was no abrupt change: continuity is perfect from the most distant days of Greece and Rome up to our own times; material progress advances by insensible gradations, and the form of the combat modifies itself no less regularly. From time to time a word, a phrase, a hint is dropped by the ancient historians, which allows us to perceive the existence and extremely important rôle of light troops. A day comes when their utility becomes manifest to all eyes; soon they force themselves to the front and take the first place.

Our classical studies have accustomed us to know but the phalanx of Alexander and the legion of Marius or of Cæsar, and to see in them the types of the Greek and Roman armies—to believe, in fact, that military decadence followed close on the days of Alexander in Greece and of Cæsar in Rome. It is, however, necessary to remember that the phalanx and the legion never by themselves constituted the armies of antiquity; that, following day by day the progress of material means and new needs, they never ceased to alter and change, and that, as regards armament and the combat, there is never any decadence except

from the æsthetic standpoint. The decline of the *arme blanche* has detracted from the splendour of the fight, but it corresponded to real needs, and the reforms adopted had made themselves necessary.

In Greece, as well as in Italy, it is difficult to raise great numbers of cavalry. The infantry "of the line," which fights in close order, was in primitive times only organised to fight against troops of like sort, not against cavalry. It is formed in phalanx in eight or twelve ranks; but we must not picture to ourselves a heavy, compact, crowded formation: the intervals between the combatants are from three to four feet, and allow them to handle their six-foot pikes freely. The offensive arms are light, but the armour is too heavy to allow even the smallest supply of projectiles to be carried. The warrior can only fight at close quarters.

Such phalanxes are mobile; they can charge vigorously, as they proved at Marathon. Their depth is not intended to give them strength in shock action—*it is well known that there never is any shock.* It is merely necessary to have a sufficient number of combatants in each file to replace those who fall, and to give the front rank moral support; it is rare that a file of eight men becomes used up by the fight, unless the warriors of one side have a very marked superiority in physical strength, in fencing skill, or in courage. This is, however, quite the exception.

Normally the two fronts come into contact with

one another, and hundreds of duels take place in which the moral and physical strength of the combatants is exhausted without many falling victims.

The chiefs are in front and lead on the troops. The best, strongest, and keenest soldiers are in the front rank. Behind them are the men of average worth. In the rear rank, that in which panic might originate, old soldiers, well trained and steady in their duty, are posted as *serre-files*.

There never is any shock. The heavy Bœotians, under Epaminondas, tried to break the Spartan lines at Leuctra and Mantinea with a deep column, "as if with the ram of a ship"; but the front rank stopped dead on coming into contact with the enemy; the rest of the column communicated to it no impulse whatever, because *an impulse never comes from the rear*, because it is never due to material pressure but *to the influence of superior will imposed by a chief who is seen in front.* The frontal action has begun; as ever, it has become interminable, and Epaminondas, having failed to break the hostile line, tried to wear it down more rapidly by calling to the front the Golden Band, the picked warriors, and in this way he achieved success.

Generally speaking, *the frontal fight does not lead to a solution.*

"When studying ancient combats," says Ardant du Picq, "one sees that it is almost always a flank attack, or one from the rear, or some sort of successful surprise, that wins battles, especially against the Romans. Among the phalanxes there

is no *mêlée*, but a mutual pressure which may last long if one side or the other does not succeed in getting its adversary taken in flank and rear by some detached body of troops."

Thus it is a mobile detached body which decides victory by *manœuvring*. From the beginning, cavalry, however weak in numbers and deficient in equipment it may be, even to the length of being without stirrups or saddles, is often the factor which decides victory, because of its mobility. In default of cavalry it is the light infantry that decides the issue. The hoplites cannot manœuvre because the phalanx must not break its ranks.

The flanks of the phalanx are its vulnerable parts. The least injury there causes disaster. Let it divide but for one moment as at Pydna, and it is lost. The more active of the enemy's soldiers penetrate the openings in the mass of troops and kill the warriors encumbered with their pikes. "And then," says Ardant du Picq, "with the enemy in the belly of the phalanx, it is morally upset and becomes a disordered mass, a mob of sheep tumbling backwards, crushing each other under the pressure of fear." The examples of this are innumerable, from Pydna to Sempach.

In order not to multiply flanks and offer to the enemy a ready-made opening, the phalanx should never be sub-divided. It can neither manœuvre nor pursue for fear of disordering its ranks. It must be formed up once and for all before the action.

The light infantry has missile weapons of which

the range but little exceeds the distance which a body of troops can cover at the double, between two discharges, without taking breath. It cannot ensure the immunity of the infantry of the line when it is acting as its auxiliary: it is impossible for it to keep the enemy at a distance. But, on the other hand, it possesses remarkable power when it is acting alone and is free from all restraint. Always in movement, always scattered, never to be closed with, it harasses the phalanx, overwhelms it with darts, and ends by destroying or taking it. It obtains decisive results which the infantry of the line is incapable of attaining.

This superiority of movement over brute force is acquired and recognised as early as the fifth century B.C. In all the Greek republics advantage is taken of the lightening of the weight of arms due to the invention of steel, and a medium form of infantry, *peltastes* or *akontistes*, more lightly equipped than the hoplites, takes their place. It fights with the sword and with long-range javelins, and combines its movements with those of the archers and slingers.

At Rome the original phalanx undergoes the same transformation as in Greece and becomes the manipulary legion, which is itself also a *quasi* light infantry, having abandoned the old pike (*hasta*) in favour of the *pilum* and the sword. Its division into maniples makes it more supple than the Greek phalanxes. Like these, it also is accompanied by auxiliaries, archers and slingers, which prepare its action and complete it.

§ 2. THE PREPONDERATING RÔLE OF CAVALRY

Such are the armament, the combat, and the troops of Greece and Rome during the fifth and fourth centuries B.C. Cavalry comes upon the scene with the Easterns and the Macedonians, then with the Carthaginian armies. It occupies the first place in their armies: heavy cavalry armed with cuirass and lance, light cavalry armed with bows or javelins; it is the active, offensive element; for Alexander and for Hannibal the decisive arm. In the Macedonian armies the light infantry supports it. The phalanx can only resist cavalry by brute force, and so weights itself with armour till it becomes merely a reserve. The ranks closed to the extreme limit, and the heavy pikes, six to seven yards long, form an impenetrable but immobile wall. The Macedonian phalanx checks the impact of cavalry, but has itself become paralytic and unsuited to the offensive. We shall continue to find the same phenomenon, due to the same causes, enduring for two thousand years.

The Romans, beaten by the cavalry of Hannibal, which outflanks them and takes them in reverse, are careful to avoid making the legion heavier. They are imbued with the spirit of the offensive and are careful to avoid all that may check their dash. Above all they provide themselves with cavalry equal in efficiency to that of their enemy. Scipio crosses over into Africa, not only that he may there snatch from his adversary the initiative which promises victory, but also

to find there the decisive arm, the Numidian cavalry of Massinissa. It is this which triumphs at Zama.

Moreover, in the days of Marius, the Romans modify the organisation of the legion; they group the maniples into cohorts of 600 men; and, thanks to this intermediate unit, the general, by a word, can regulate the distribution of his forces. He forms three or four lines, échelons and reserves. The legion was always supple; it now becomes capable of manœuvre.

This solution is admirable for its intelligence and its warlike spirit; but it must give way to the pressure of events: the rôle of missile weapons continues to increase in importance because they alone kill men and make breaches in cohorts. The latter are powerless against Teutonic horsemen and above all against Parthians, whose bows are stronger than those of the Romans.

Already in Cæsar's armies archers and slingers are more numerous than legionaries; they are mixed with them in the cohorts and are formed into considerable bodies on the wings. At Pharsalia they form the bulk of the army, and Cæsar's few veteran cohorts are but a kernel, a reserve.

The Empire consecrates this state of affairs by admitting archers and slingers into the legion, which is further strengthened by the provision of war machines, *chevaux de frise*, and palisades on which the dash of cavalry may break itself. The latter covers itself with a coat of mail, and

later on, with armour; it is provided with stirrups and saddles; and plays a decidedly active part, for it attacks and manœuvres. Infantry, massive and paralytic, has for its sole mission the stopping of charges.

Such are the Roman armies after the Antonines; such also will be those of the Middle Ages and even of the sixteenth and seventeenth centuries, for the Spanish *tercios* of Rocroi behave like the old phalanxes.

The respective rôles of cavalry and infantry appear clearly at the battle of Strasburg in 357: the Roman cavalry allows itself to be overthrown by that of the Teutons, whose charge breaks itself against the cohorts. The darts hurled by the latter inflict heavy losses on the Teutons and throw them into disorder. The Roman cavalry, which has re-formed, then gains a complete victory.

Belisarius (530–554) covers his immobile phalanxes with an entrenchment. They await the charge of the enemy's cavalry, which the archers overwhelm with arrows, then the Byzantine cavalry charges in its turn. The English operate similarly at Crécy (1346), and at Poitiers (1356), except that their phalanx is composed of dismounted men-at-arms. Du Guesclin, in his turn, becomes victor at Cocherel by drawing the enemy on to his infantry and then counter-attacking him.

It is not that the offensive cannot succeed, but it must be undertaken by the appropriate arm—the cavalry—and by manœuvring to take the

enemy in flank. It is thus that the Goths are victorious over the Romans at Adrianople (378), the Arabs over the Byzantines, the Greeks over the Saracens (863), the Crusaders over the Turks at Doryleum (1097).

As to infantry, it is powerless to overcome an armoured cavalry, as one sees notably at Hastings (1066), and at Bouvines (1214). All it can do is to remain behind an entrenchment and use its missile weapons.

§ 3. THE INTRODUCTION OF FIREARMS

The shapeless bombards which made their appearance on the battlefields of the fourteenth century played there but an insignificant part. It is only in the middle of the fifteenth century that artillery begins to exercise a serious influence on the form and issue of battles.

The first really efficacious firearms were, properly speaking, neither cannons nor manual weapons. They weighed from twenty to sixty-five pounds. But soon some were lightened and others strengthened. Charles the Bold attacks the Swiss with 400 battery guns and 800 arquebuses for fire from rests. He is beaten at Morat because the Swiss have, and make good use of, 6,000 hand guns. The discharges of these arquebuses throw disorder in the ranks of the Burgundian cavalry, armoured though it be, and the halberdiers profit by its disorder to charge it.

Henceforth, infantry (complemented by artillery) is able to resume an offensive rôle, above all when

it has for its *armes blanches*, like the Swiss *of the fifteenth century*, short and handy halberds or axes; but it will lose its offensive value by adopting long pikes and by forming in squares.

At the beginning of the sixteenth century projectiles are able to pierce body armour. Sometimes discharges of artillery tear the heart out of battalions of pikemen, of which men-at-arms complete the breaking; sometimes they blow a hole through the cavalry and hand it over disorganised to the footmen. The one is Marignan, the other is Pavia.

There is then a complete revolution in fighting. Cavalry certainly remains the decisive arm, though infantry now is able to put an attack through successfully. The early progress of firearms then is definitely favourable to the offensive.

What a long time had been necessary to obtain this first result! The invention of gunpowder is ascribed to the seventh century; firearms do not appear till the middle of the fourteenth; it is only in the fifteenth century that arquebuses and guns are of practical utility and play an important part on battlefields; at the beginning of the sixteenth century they produce the capital change to which we have just drawn attention and give the infantry an offensive value, but more than another century is needed for the cavalry to lose the first place and for the ordering of battle to be changed; it will require another two centuries for this result to influence the conduct of operations. *It will have taken more than a*

thousand years for the invention of gunpowder to have transformed war.

During the sixteenth and seventeenth centuries portable firearms continued to become more powerful and above all more easy to handle. The musket succeeds the arquebus, the forked rest is suppressed, and the rate of fire goes on increasing rapidly.

In the sixteenth century infantry, armed with pikes, formed big squares which, like the Macedonian phalanx, were intended to receive the shock of cavalry. The arquebusiers, requiring a long time to load their weapons, could only skirmish at the corners of these squares.

As the loading of the firearm becomes more rapid the number of musketeers is increased. When the musketeer loads his weapon in the space of time required for the firing of six volleys, a continuous fire is obtained from sections formed in six or eight ranks, and the pikemen hardly run any risk of being ridden down by the enemy's cavalry; they are more effectively protected by fire than by the compactness of their squares.

From 1580 to 1648 the Spanish and Austrian infantry, which longer than that of other nations retains the old formation in large squares, finds itself very inferior to the Dutch, Swedish, and French infantry. In these pikemen and musketeers alternate in small bodies, the latter supporting the former by fire, while the former, if necessary, receives cavalry attacks at the point of its pikes.

After Rocroi and Lens, Spain abandons the use of great masses of pikemen. Their number dimi-

nishes everywhere in Europe. On battlefields men throw away their pikes to pick up muskets. At the beginning of the sixteenth century there was one arquebusier to five pikemen ; about 1680 there are, in theory, five musketeers to one pikeman, and in practice the proportion is even greater.

Towards the end of the seventeenth century a musketeer is able to load his weapon during the time needed for three or four discharges. After the adoption of the flint-lock musket the number of ranks is reduced to five, and even to four.

The more rapid and accurate fire becomes, the more it is desired to increase it. The numbers of the infantry are continually added to. In the days of Turenne it was barely twice as numerous as the cavalry, but it forms five-sixths of the army of Villars.

Cavalry, however, still remains the offensive and decisive arm. It is cavalry which charges the enemy when shaken by musketry fire. One sees it at Rocroi manœuvring on the wings before falling upon the infantry masses in the centre. At Witstock (1636) it is able to pursue the enemy and turn his doubtful defeat into disaster.

Mobility, manœuvre, the offensive spirit, these then are the postulates of success which may be sought for in vain in mass formations. The Ionian skirmisher has destroyed the Doric phalanx. The Roman maniples have broken the Macedonian phalanx ; but cavalry triumphs over the one and the other, and remains a decisive arm until the moment when infantry acquires

sufficient power of manœuvre to get the better of cavalry itself.

The later battles of the seventeenth century, notably that of Fleurus, herald the advent of the new era in the important rôle assigned to infantry. Fire effect has produced so vivid an impression that now it alone determines the dispositions made on battlefields. The troops are drawn up with a view to the fire fight; it is still only a preparatory phase of the attack, but its result affects the final success to such a degree that "preparation" becomes more important than "attainment." The infantry fills the whole width of the battlefield, and the effort is made to produce a sustained fire such as is delivered by a continuous line.

From this spring those linear deployments which remain characteristic of battle formations for more than a century, and which entail consequences so momentous on the leading of armies.

Troops still are but little able to manœuvre, and the operation of forming them in order of battle is very lengthy, for there is no convenient evolution for forming a deployed line from column of route.

§ 4. LINEAR TACTICS

When the use of muskets has become general it is found that their rate of fire (three rounds per minute) admits of men being formed in three ranks, one rank loading while the other two are firing; the manipulation of the weapon, moreover, is sufficiently handy to allow the ranks and files to be closed.

From 1720 on the Prussians are drawn up in three ranks in close order; the French follow suit thirty years later. This shallow formation admits of infantry being able to manœuvre; the line is sub-divided into sections, each section wheeling to right or left, thus forming "*column of sections at deploying interval.*" This is the first drill evolution known.

Firearms struggle successfully though with difficulty against prejudice. What is perhaps most striking, amid the progress accomplished, is the obstinate opposition offered to them, and that, not only by ministers, but by the most skilful generals. It is not only Louvois who for years persists in banning the musket and maintaining the pike, it is Maurice de Saxe, it is Frederick himself, who will not admit the preponderating rôle of firearms.

Frederick only gives way before the repeated experiences of his own battles. At the outset of his career he renews annually the order to advance to the bayonet attack and to fire as little as possible; he states dogmatically that it is cold steel which decides things; but in 1758 he begins to write that "to attack the enemy without having procured for oneself the advantage of a superior, or at any rate an equal, fire, is to make men who have only wands fight against armed troops, which is impossible." Ten years later, in his "Military Testament," the change is still more marked; "*Battles are won by fire superiority.*" This is the decisive phrase which marks a new era in the fight. Since then, be it

at Austerlitz or at Waterloo, at Gravelotte or at Plevna, in the Transvaal or in Manchuria, *battles are won by fire superiority.* The charge is the decisive act, the climax; but preparation has assumed such importance, and influences the result of the charge to such a degree that the latter has reverted to the second place.

It is always cavalry which, in normal circumstances, should give the *coup de grâce*, but it is infantry which strikes hard and decides the victory. Moreover, neither the one nor the other can by shock break down the resistance of the hostile front, so great is the strength which it derives from its fire. The English at Fontenoy crushed the French centre by their fire; then the fire of the redoubts piles them up into one heavy column, as incapable of winning by shock action as that of Epaminondas. Maurice de Saxe rejoices at the sight of this great machine as did Xenophon's Cyrus at sight of the Egyptian masses.

Frederick II., in the same age, draws from linear tactics all that they are able to give, and makes envelopment by the infantry, convergence of fire, and the cavalry charge co-operate in his decisive attack.

Being a man of genius he does not abandon himself to circumstances, and so frames for himself an ideal form of attack, to which he always tries to approximate. "Oblique order" has been much talked about, yet its very existence has been denied. Napoleon insists in seeing in it only a joke, a stratagem of old Fritz to mislead

French tacticians; these, moreover, use the expression "*oblique order*" in the very wide sense of attack on a wing. It is enough to read a few pages of the military works of Frederick to satisfy oneself that oblique order is a real thing, that it is, as its name indicates, an order or a disposition, and not an abstract principle, still less is it a joke. Frederick, for instance, wishing to concentrate all his efforts on his right without exposing his left to disaster, refuses his left wing and pushes his right wing forward. Having deployed his army, he advances his right-hand battalion; each of the others sets itself in motion in its turn in such a way as to find itself refused to the extent of 50, 100, or 200 metres according to the order given. They are thus écheloned from right to left, and all the heavy artillery and reserves are accumulated on the right, which is to outflank the end of the enemy's line, crush it under converging fire, and then attack it with the help of the cavalry. Again it is the cavalry which has the last say in the matter, although the major part of the task has been accomplished by musket and gun.

Such is the final form of combat in linear formation. While Frederick brings it to this high degree of perfection, French soldiers seek for progress along quite other lines.

§ 5. FRENCH TACTICS IN THE EIGHTEENTH CENTURY

The deployment of troops for battle, their movements, even their marching in the attack,

were remarkably slow, and many officers were busy with these questions at the beginning of the eighteenth century. This slowness had many drawbacks; it was harmful to the offensive spirit and it impeded all manœuvre on the battlefield; but above all it prevented armies from passing rapidly from column of route to battle formations, from hastening the encounter, and from seizing hold of the enemy and forcing him to fight.

The first to propose a revolution in tactics, Chevalier Folard, saw but one side of the question, and that the least important. He thought only of the last phase of the fight, the charge, and he believed that he had put everything right by substituting as a battle formation massive closely locked columns in place of the shallow linear order. He invoked the authority of Epaminondas, and believed that he could destroy work which had been accomplished by the very nature of things during the course of two centuries.

The majority of officers who had war experience recognised the difficulty of fighting in such a formation. Above all they reflected that the question at issue was not so much to change the order of battle which had been imposed by actual experience, but how to assume that order rapidly and form front in any direction. That was the object which column formations should render attainable. An effort, therefore, was made to discover column formations that would be easy to form and to deploy, and easy to move as well. The adherents of shallow formations, starting from the idea of the deployed line, and the

adherents of deep formations, starting from that of the massive column, tended towards a common solution which was formulated about 1764 by Comte de Guibert.

The eighteenth century, from 1721 right up to 1791, witnessed the quarrel and the reconciliation between shallow and deep formations. For a moment, from 1771 to 1776, French soldiers became enamoured of the Prussian methods disclosed by the renegade Pirch, then they returned again to the French system of manœuvre in closed columns. Sometimes these are columns of independent battalions, supple and mobile; at other times they are big columns of divisions, which are good formations of readiness for reserves.

Maréchal de Broglie, who handled armies in close columns fairly well during the Seven Years' War, initiates in 1778 the great experiment of the camp of Vaussieux. It proves that the evolutions of an army in shallow formation are heavy and difficult; that movements in closed columns are far preferable to them, provided one does not adopt the elephantine dispositions of Mesnil-Durand, but merely the battalion column formed on the method of Guibert, without any movement in square or any formalism.

At the end of the reign of Louis XVI. there remain hardly any adherents of shallow formations who insist on wishing to manœuvre habitually in line, while there are few adherents of deep formations who still see in the column a normal fighting formation. We have drawn very near to a solution common to the two schools, admitting

of the use of columns for movements and of line for fighting. This is what the armies of the Republic and of the First Empire will put in practice.

The regulations of 1788 and of 1791, drawn up by adherents of deep formations, combine the evolutions of lines and movements in closed columns.

The eighteenth century, at the same time, called skirmishers into being again. They had existed from the most remote past until towards the end of the seventeenth century. On the advent of the musket the desire to provide a continuous fire on the whole battlefield had led to the suppression of isolated marksmen whose presence impeded the fire of the dense lines of battle. But in the eighteenth century the inefficiency of section volleys is recognised; Austria floods battlefields with her Croatian skirmishers, and every one imitates her.

In France the adherents of shallow and deep formations are at one in having recourse to skirmishers in two distinct ways: on the one hand, in piquets of thirty, fifty, or sixty men per battalion, to initiate a fight or to act on the wings; on the other, in battalions of light infantry (chasseurs), or sometimes line battalions used as if they were light troops, which scatter through broken or wooded country. The experience of the campaign of 1792 consecrates the use of both forms of skirmishers, under the names of *tirailleurs de bataillons* and *tirailleurs en grande bande*.

In 1792 French troops know fairly well how to manœuvre so as to apply all the regulation formations;[1] but during the following two years they are commanded by unskilled leaders, they fight in line, sometimes as skirmishers, sometimes in strange formations in which deployed battalions follow one another at long distances.

Finally, from 1796 onwards, manœuvres are revived in closed columns which deploy into line when they come under the enemy's fire. In the great battles, Austerlitz, Jena, Wagram, etc., the divisions move in groups of small columns, and deploy into shallow formations to fight. Macdonald's column at Wagram, which has been quoted so often, is nothing but a formation improvised, somehow or other, in a few minutes, to receive a cavalry charge point-blank.

When Napoleon leaves to his subordinates initiative in their dispositions, they occasionally adopt deplorable ones: thus Ney's divisional generals at Friedland plunge into the fire of the Russian batteries—the one with his entire division in one long column of sections, the other in a line of 1,200 metres' extent. The Emperor, when he intervenes, always prescribes a mixed formation, in which battalions in column support deployed battalions; they are ready to repel a charge, to fill a space, to front in a new direction. Whatever Marmont and Gouvion-Saint-Cyr may have said, Napoleon is, in this as in everything else, in the fullest acceptation of the word, the master

[1] These are troops of the line and the volunteers of 1791, well officered and trained for nearly a year.

of his generals; but in his absence errors are multiplied and have extremely serious consequences.

From 1806 to 1812 the armies of Continental Europe adopt our manner of manœuvring and of fighting. They put aside all formalism and act with more independence and activity. The Prussian regulations of 1812 gave official sanction to this evolution.

In Spain Wellington adopts tactics which admit of the greatest possible employment of fire, and he makes a wonderful use of ground to surprise his adversaries. His infantry is deployed *in two ranks*; a third of his men is used as skirmishers and falls back on the flanks. The French, according to their wont, move forward in small columns preceded by skirmishers; but suddenly the formidable discharge of the British stops them at the moment when they wish to deploy. It is soon nothing but a disordered mob which is whirled round and thrown back before the counter-attack.

With the progress of infantry, cavalry has certainly lost the premier place in battle. It still contributes to successes in a notable degree, but it can no longer be the most effective factor in procuring victory. Without it no decision can be complete; but if cavalry still makes a victory decisive, it no longer wins it.

Old Blücher, a hussar, at the height of his struggle with Napoleon, coined the phrase which records the place in war of the two auxiliary arms: "Don't talk to me about your hussars; against that rascal it is guns we want, and plenty of guns!"

Artillery, since the sixteenth century, has been used in most varying proportions. The different Powers have tried without intermission to reach a proportion of four pieces per 1,000 men and to have guns attached to battalions. Only the state of their finances has kept them from always realising this ambition. It is a great mistake to believe that experience has condemned battalion guns. "Every day," said Napoleon, "I am more convinced of the great harm done to our armies by taking away the regimental guns."[1] And this step, moreover, was only induced owing to the low state of the funds in 1795.

Frederick II. had organised a numerous artillery comprising howitzers and a large proportion of pieces of heavy calibre (12-prs., 16-prs., and even 24-prs.). He placed some in his Advanced Guard so that it might never be stopped by any material obstacle, and he used it freely in attacking localities. Our armies of the Revolution and Empire do not seem to have made as rational a use of it. From Gorschen to Hougoumont, for instance, they use themselves up in fights for localities during which they do not make sufficient use of 12-prs. and howitzers.

Their artillery is mingled with the infantry, and fires now on the batteries and now on the battalions of the enemy.

In fact, from the middle of the sixteenth century, the power which guns put at the disposal of the offensive has been lost to sight. Civil wars ruin states, which can no longer afford to

[1] "Correspondance," vol. xix. p. 58, No. 15,272.

maintain a numerous artillery. The decisive effects of the artillery fire at Marignan are no longer remembered; in vain the effort is made to pierce through battalions by hammering with men, and it is forgotten that such a result can be obtained by hammering with guns. We must come down to Friedland (1807) to see a frontal attack succeed owing, almost entirely, to the effect of cannon-balls and case-shot. Undoubtedly the progress effected in armament is favourable to the offensive, but it is on condition that the offensive has recourse to fire and not to cold steel.

This brute-force use of guns, these breaches blown through masses of men by cannon-balls, become the rule. At Wagram, at Borodino, and again in all the battles of 1813, they repeat themselves. It is no longer Ney or Murat, it is Drouot and Sénarmont who take the first place. But the enemy opposes battery to battery till, however violent it may be, the action of artillery is in its turn neutralised.

To play the capital rôle which now devolves upon it, it is necessary that the artillery should not allow itself to be surpassed by that of the enemy, either in numbers or in quality. It is the number of pieces rather than that of battalions which henceforth serves as the measure of the relative strength of armies.

"It is necessary to have as much artillery as one's enemy," said Napoleon. "*Experience shows that it is necessary to have* 4 *guns to every* 1,000 *men*, including infantry, cavalry, artillery, and train.

"*The better the infantry, the more one must husband it and support it with good batteries.*

"*A gun should always have with it* 300 *rounds.* It is the expenditure required for two battles." [1]

The Emperor "complained that usually the artillery did not fire enough in a battle. It is an axiom in war that one should not lack ammunition; *and he advised firing continuously without calculating the expenditure of rounds.*"

He summed up the new tactics in saying: "The invention of powder has changed the nature of war: missile weapons are now become the principal ones: *it is by fire and not by shock that battles are decided to-day. . . .*" [2]

"The power of infantry lies in its fire. In siege warfare, as in the open field, it is the gun which plays the chief part; it has effected a complete revolution . . . it is with artillery that war is made." [3]

§ 6. THE COMBAT FROM 1815 TO 1866

After the wars of the First Empire, minds are engaged in putting the experience acquired to good account, and in drawing up new regulations. In France the regulations of 1791 were still held to be satisfactory as a drill-book; many officers judged that they were enough and that there was no need to lay down rules for the fight, especially for skirmishers, since skirmishers whose movements were governed by regulations would no longer be skirmishers.

[1] "Correspondance," vol. xxxi. pp. 328 and 329.
[2] *Ibid.*, vol. xxxii. p. 27. [3] *Ibid.*, vol. xxx. p. 447.

The introduction into the regulations of orders for the fight came about, however, in 1831, when big columns were done away with, as also were linear formations. The skirmishers alone were to carry on the fire fight, although they were always to be widely extended (the regulations laid down a maximum extension of fifteen paces). The proportion to be put into line as skirmishers was quite undetermined: small bodies in close order formed supports and reserves.

The Prussian regulations of 1847 offer a considerable likeness to the French regulations of 1831, in all that concerns the fight. They also commit to the skirmishers the conduct of the fight, and anticipate that sometimes they will suffice to decide success. That which above all distinguishes them from the French regulations is that they form of each company an independent column. The number of companies put into first line or kept in reserve is variable, as in France; but the battalion reserve consists of companies more or less grouped together, instead of being, as in France, one single column. But these variations are of little moment.

From the squares of the sixteenth century we have come to battalions in eight ranks, in six ranks, in four ranks, in three ranks; in future there will only be skirmishers; the evolution is complete. The French artillery puts the first rifled guns into line in 1859; Austria, in return, secures a rifle superior to ours. This advantage is neutralised by the dash with which our infantry pushes in to close range to begin the struggle.

Whatever may have been said about it, the regulations of 1831 are applied as much as regulations ever can be applied on battlefields. The battalion puts into first line a certain number of companies, which extend their skirmishers, and when the moment for it has come, the units or fractions of units kept in reserve move forward and attack. Only in 1859, as in the wars which follow, *the reserves melt prematurely into the skirmishing line, and the companies or battalions go forward to the assault on their own initiative.*

To sum up, the regulations of 1831 aimed at organising a line of skirmishers with weak battalion reserves instead of the battalion preceded by a few skirmishers; experience shows that the skirmishing line is quite capable of carrying the fight through to the end, but that one cannot keep reserves in hand.

The Prussian infantry manifests exactly the same phenomena in 1866. It has the well-known Dreyse needle-gun, a far better weapon than that of its enemy, and it very soon acquires a feeling of its own superiority. It makes the greatest use of its fire, which does not prevent it (far otherwise!) from continuing to advance. The employment of fire and the forward movement do not thwart one another; they support one another. The companies are led on by their commanders and are not carried forward by the impulse of reinforcements from the rear.

"The tactics of the company columns consist in being preceded by numerous skirmishers, which by degrees the supports come up and join. . . .

Every commander imparts a forward impulse to whatever he finds under his hand. The second line strives to get up into first line as soon as possible, in order to take part in the fight in the first place, and secondly because a great part of the bullets and projectiles intended for the first line fall upon the second. All ranks, officers and men alike, seize with joy the first chance of getting forward and of pushing into the first line. But an inevitable consequence ensues: at the outset the troops were drawn up in deep formation in the following way: a skirmishing line, then reserves, and then, farther back, a second line. All this disappears to give place to one single line, thin and long." [1]

The whole fight, right up to the end, is carried on by the skirmishers, to whom the compact masses of the Austrians offer excellent targets.

By a singular concatenation of circumstances the Austrian artillery finds itself in a position of superiority to the extent of sometimes stopping the progress of the hostile infantry, although the Krupp guns ought to have secured to the Prussians an undisputed advantage. The latter have not had time to study the characteristics of the new artillery and to draw from it the tactical possibilities inherent in it. They are happy in the possession of a gun which shoots accurately to 3,800 metres; they imagine that they will be able to destroy the enemy's guns even at such ranges as that; but the new shell

[1] "Essay on Tactics," by May, translated by Furcy Raynaud, pp. 12 *et seq.*

bursting on graze has not got so extensive a radius of action as the old round shot fired to ricochet; the accuracy of fire, however remarkable it might be for the time, does not admit of fire for destruction of material by direct hits at 3,800 metres. Some officers, on the other hand, being accustomed to come into action at 1,000 or 1,200 metres from the enemy, continue to do so with the new equipment, thus losing the benefit of its advantages.

Finally, a fairly large proportion of the artillery was kept in reserve to be used in mass, at close range, at the decisive point, as was done in the wars of the First Empire. This reserve, being unable to pass the marching columns on narrow roads, never came up in time.

To sum up, the Krupp guns cut rather a poor figure in this war, and after the campaign are the target of violent criticism. It required the clear-sighted determination of General von Hindersin to preserve the new equipment, to discern the errors which impaired its efficiency, and finally to correct them radically in three years by means of admirably devised practices and instructions.

CHAPTER II

THE COMBAT IN MODERN WARS

§ 1. IDEAS ON THE COMBAT BEFORE 1870

The effects of rifled firearms, especially those of the needle-gun, produced a great sensation in France and in Germany. Later on, under the impression created by the events of 1870, it was asserted that the opinions held in France, and above all the Ministerial instructions issued from 1866 to 1870, had defensive tendencies which contributed materially to our disasters. This was not so. The writings, whether official or not, published at that time in France and Germany were inspired by the same ideas; if there is a difference, it is rather in favour of the French regulations, and it is elsewhere that the reasons for our reverses must be sought. It is essential to satisfy ourselves on this point, and to affirm that good regulations are not enough to make well-trained troops.

That which impressed the imagination most deeply was the preponderating influence of fire. Moltke, uneasy on account of the potentialities of the chassepôt, wrote in 1869 in his "Instructions for the Commanders of Large Formations":

"The advantages of the offensive are well enough known. It enables us to impose our law on the enemy, obliges him to subordinate his dispositions to ours, to seek means to oppose us—that is understood; but, in the end, he may find these means. The offensive knows what it wants; the defensive is in a state of uncertainty; but in the end it may penetrate the intentions of the assailant.

"The offensive attitude kindles the spirit; but experience has proved that this state of exaltation is transformed into an opposite condition no less acute if one suffers heavy losses. . . .

"It is absolutely beyond all doubt that the man who shoots without stirring has the advantage of him who fires while advancing, that the one finds protection in the ground, whereas in it the other finds obstacles, and that, if to the most spirited dash one opposes a quiet steadiness, it is fire effect, nowadays so powerful, which will determine the issue. If it is possible for us to occupy such a position that the enemy, for some political or military reason, or perhaps merely from national 'amour propre,' will decide to attack it, it seems perfectly reasonable to utilise the advantages of the defensive at first before assuming the offensive.

"In the face of that craving to push on which inspires our officers and men, it is necessary that commanders should hold them in rather than urge them forward. . . .

"On the same line of reasoning, positions properly so called again assume importance, but their

character is not quite the same as formerly. We must wish the enemy to attack us, and must not seek for unassailable positions."

We may well be astonished that the troops to whose leaders these "Instructions" were issued always acted offensively; we shall be still more surprised, after reading the French regulations, to find that it is actually the French authorities who have been reproached with defensive tendencies and the cult of positions.

The "Observations" of 1867 declare that "fire has to-day acquired a preponderating effect on the battlefield," but they in no wise infer from this, as does Moltke, that it is necessary to remain on the defensive. It is of the attack that they speak in the first instance as being the normal form of the fight. They explain clearly that in the attack modern weapons compel us to take precautions about which men did not bother in Africa, in the Crimea, in Italy, and in Mexico; but they are far from insinuating that this is a reason for abandoning the offensive.

The "Observations" have often been abused for the following phrase, the only one which is quoted: "*Frontal attack, over open country,* against unbroken infantry, especially if it is *protected by obstacles or by cover,* has always been a dangerous operation. To-day particularly, with the new weapons, *the advantage is on the side of the defence.*" Now, as Moltke says with good reason, it is patently true that the motionless and covered marksman has an enormous advantage over the attacker who is compelled to expose himself

continually; and the attacker can only overcome the defender if he counterbalances this advantage by other factors of superiority—numbers, skill, the help of artillery, etc. In this connection let us remember that the advantage acquired by the defence is above all due to the introduction of breech-loading, thanks to which the soldier can remain all the time under cover. The great difference between the war of 1866 and former wars is that the skirmisher is under cover or lying down.

To sum up, the few words which have been so much abused in the "Observations" of 1867 contain nothing which should astonish us; they can only become harmful if, like Moltke, we are led to extol the defensive. But this is what the "Observations" do not do. They point out that there are dangers to be guarded against, and that is all. And we will guard against them, and we will attack!

"Direct attack, ending in a bayonet fight, accords with the impetuous character and courage of our men. Let us persist in encouraging its use, but without losing sight of the fact that modern improvements in shooting, *skilfully turned to account by an enemy who is more collected*, might well turn into disaster the *unprepared* attack on a position which is *openly assaulted*."

Might we not say that the authors of the "Observations" foresee Moltke's defensive doctrine, and teach the opposite? They are clearly possessed of the offensive spirit, and it is not they who dream of avoiding the assault and the hand-

to-hand fight: once the fight has been entered upon by the skirmishers and the artillery, "the troops soon see the time come when *the hand-to-hand fight*, the last act of the struggle which has become general, *will decide the victory*. After favourable conditions for its delivery have been brought about by manœuvre, this decisive attack must be prepared by fire. Then the attacking columns, rapidly formed, go boldly forward with all the confidence which springs from the practical certainty of success. . . . No fire, but a determined advance to close on the enemy with the bayonet and at the charge."

In truth this is a strange sort of defensive! The "Observations" do, however, mention the defensive, but it is to say that one must beware of thin lines: they are *difficult to give a lead to, a capital defect*, for "*the best way of defending a position is oneself to attack*."

Such is the teaching which has been reproached with defensive tendencies. To us, on the contrary, it seems inspired with the purest offensive spirit as well as with great ability. What it may be found fault with for, on the experience of subsequent events, is for not realising that *the skirmishers can put the fight through right up to the end*. Undoubtedly the conception of attack in company, half-battalion, or battalion columns is more enticing, but one must recognise facts; the attack in columns has never been anything but a fiction, and it is more so now than ever.

All this offensive doctrine, and all the traditions of the Crimea and of Italy, come to nought on the

battlefields of 1870, like the teaching of Dragomiroff and the tradition of Skobeleff in the war of 1904. No regulations or traditions take the place of practical training.

§ 2. THE COMBAT IN 1870-71

Thanks to the deplorable changes introduced by General Lebœuf, our artillery found itself inferior in 1870 to what it had been in 1859! The gun had a sufficient range; the exclusive use of fire with time fuse ought to have given us a fire effect greater than that of the Prussian shells; but on the other hand the suppression of four of the vents of the fuse made it out of the question for us to produce any effect whatever at ranges between 1,500 and 3,000 metres.[1] Our army, deprived of artillery, could not bite, so to speak. The inadequacy of the artillery had much to do with the defensive attitude of our troops at the outset of the war.

The German batteries, having nothing to fear from ours, were able to turn their fire on to our infantry. Against even the smallest formations in close order they had a very serious effect, and imposed on our troops premature deployments, either into extended order or into line in two ranks. From the accounts of the battle of Froeschwiller it is easy to see how often the counter-attacks of our infantry and its attempts to rally were stopped by the enemy's guns.

[1] The *fuse* is that which causes a shell to burst either on graze (*with percussion fuse*), or in the air after a certain time has elapsed (*with time fuse*). It is set for the desired time by pricking the *vent* corresponding to this time.

At Froeschwiller, as at Forbach, our infantry act as offensively as the general situation admits. The counter-attacks in front of Froeschwiller are marvels of energy, but, being unsupported by the artillery, they collapse under the fire of the Prussian batteries.

Before Metz the situation is no longer the same; the army has been beaten, and the higher command produces on it a depressing effect. Helped thereto by the Prussian gun fire, we fall into a perfect abuse of line formations. On August 16, as soon as the enemy is reported, lo and behold! all the battalions of the 2nd Corps, then all those of the 4th Corps, deploy without any more ado. Then comes the moment to charge; no general or colonel, brandishing his sword, can shake these long lines into movement. By good luck some captain will seize the initiative to do something on his own account; he will carry his company with him, the others will follow little by little, but it will be slowly and late. The opportunity for charging will have passed.

The regiments lose all capacity for manœuvre and all aptitude for the offensive as soon as they have adopted this rigid formation, which for a hundred and fifty years efforts have been made to avoid.

The Prussians, trained in applied tactics, direct their company columns according to the lie of the ground and the position occupied by their adversaries. They move handily, easily, with that freedom of gait indispensable to the offensive. On coming within range, each company extends one

out of three sections; it extends a second section when the first finds itself 400 or 350 metres from the French skirmishers, and, in most cases, the whole company finds itself in the firing line in a few moments, for no body in close order can remain under fire.

It is well known how the small columns of the Prussian Guard suffered while debouching on the glâcis of Saint-Privat. The German infantry as a whole suffered such losses in the battles of the month of August that a special order of King William was issued prescribing that nothing was to be neglected which might render formations less vulnerable. It was then that the new tactics came into being, tactics which were set forth by the Duke of Wurtemberg in a well-known pamphlet. Sections of skirmishers gain ground by running forward, and throw themselves down. Behind them, also at racing pace, come the supports and reserves in small groups. They lie down to recover breath and then start running forward again. Having got within effective range, they lie down again and open fire.

The attack in thin lines, covered by skirmishers, is adopted as the only form of offensive in open country, and it is strictly forbidden to expose to the enemy's fire units in close order at ranges of under 1,500 metres.

In the French Army, the generals of the war of National Defence follow the same principles; they form their infantry in two lines of skirmishers, 600 metres apart, followed by deployed lines, at distances of 600 metres between lines.

A remarkable fact is that although the worth of the recruits and "mobiles" taking part in the second portion of the war is greatly inferior to those of the old troops who fought before Metz, they act more offensively. This is partly because of the new tactics adopted and also partly because the artillery has made up its mind to replace the two period time fuses by percussion fuses admitting of bursting shells at all ranges.

The war of 1870 confirms this important point, which had already been established in 1866, that the fight is carried through up to the end by the firing line, and that the firing line does not confine itself to fire action but also assaults.

Few truths are better demonstrated or more important, but also few are harder to accept: no special troops, no assaulting columns, are required to complete the attack; the skirmishers retain enough *moral* to plunge into the hand-to-hand fight on their own. Close order is useless, impracticable in the attack as in the advance.

The attempt has been made to draw conclusions from this war as to the use of artillery. The enormous superiority of the German artillery would have sufficed to assure it of success no matter how it was used; yet what it did in 1870–71 was held to be consecrated by experience. Thus it was that the following rules were admitted, viz. that all the artillery should come into line as soon as possible, engage in a duel with the enemy's artillery, crush the latter, then prepare the infantry attack by a lengthy fire on the enemy's positions.

For twenty-five years and more the artilleries of Europe have lived on these principles, which really rest on no foundation of irrefutable experience.

From the great battles of the whole war one general conclusion is to be drawn, and that a most definite one, that fronts are inviolable. In spite of their superiority in numbers and in tactics, the Germans never succeeded in taking a position by a frontal attack, and the French still less so.

The defensive has of course shown itself to be incapable of leading to victory, but on the battle front it has everywhere made proofs of that superiority which Moltke attributed to it. Whether it is a question of the French at Saint-Privat, or the Germans at Champigny or Héricourt, well-chosen and well-arranged defensive positions, even when very weakly held, could not be carried. The same phenomenon will be found again in 1877 at Plevna, and later on in the Transvaal. On the Lisaine, as on the Modder and the Tugela, the defence is made good by troops in little depth: one to two men per yard of front.

§ 3. TACTICS IN PEACE-TIME (1871-99)

The "Report to the Minister," the preamble to the Regulations of 1875, expresses the conclusions which the war, still fresh in men's minds, imposed:

"(1) The preponderating importance of fire as a method of action.

"(2) The impossibility for a body of troops of

any considerable size to move or to fight in close order, whether in line or in column, within the zone of the enemy's effective fire.

"(3) Consequently, the necessity of subdividing the troops in the first line and adopting for them action in extended order.

"(4) *The compulsory transference of the fight itself to the skirmishing line, which formerly was only entrusted with its preparation.*

"*Troops massed in column, or in line in close order, can no longer manœuvre, fight, or even remain in position under fire. . . . In consequence of the destructive effects of fire, such formations no longer afford even the assurance of solidity nor that aid in maintaining cohesion and facilitating control of the men by the commander which they formerly did.*"

"One had good grounds for believing," says General de Négrier, "that since the doctrine was determined under such conditions, *nothing would be easier than to follow the path marked out.*" But, withal as impressions faded, the heroism of military writers showed itself on paper in a firm determination to achieve the impossible. Some in order to obtain a heavier fire, others to provide more forcible shock action, contributed to rehabilitate close order formations.

The Regulations from 1875 to 1894 have one characteristic in common: springing apparently from the original text of those of 1875, they maintain the complex system of firing line, supports, local reserves, and reserves in échelon. So, just as the old soldiers of 1815 feared would

be the case, the fight is regulated to excess: the frontages, the distances, the movements of the successive échelons, the whole progress of the combat is minutely legislated for. We pride ourselves on being at last freed from the old-time linear evolutions. We have gone one better.

Properly interpreted, the events of 1877 would have opened the eyes of tacticians. Before Plevna, the Russian guns embark on a lengthy artillery preparation of the attack, then cease fire to let the infantry pass. The latter finds the Turkish trenches defended by a violent rifle fire. It throws itself forward as a whole into the front line, where it forms but a mob; the compact masses coming up from the rear have been unable to cause a forward movement; Skobeleff, however, carries his men on with him by placing himself in front of them and marching on the enemy.

As regards the artillery, these events were ill interpreted everywhere. It was not recognised that the fault of the artillery at Plevna was to have ceased fire at the moment the infantry assaulted. The inference drawn was only that the preparation had been insufficient, and that mortars or high-angle guns had been lacking.

The infantry regulations from 1875 to 1900 do not say a word about artillery; this was so, not because the latter could afford to take no interest in the principal arm, but because it was admitted that it must act first, and it was held to have completed its task when the infantry advanced

to the attack. In the second part of the war of 1870–71 the Germans had often had recourse to a prolonged artillery fire before assaulting; they counted much on the co-operation of guns; but they thought to use them before, and not during, the infantry attack. All European armies adopt the same doctrine.

As to infantry, the majority of military writers at that time recognise that it must act by its fire, but they draw unwarranted deductions from this fact: "It is necessary," they say, "to acquire fire superiority, and to this end, other things being equal, the greatest possible number of rifles must be put into line. Why, therefore, this extension at the outset of the fight, this thin-drawn line of skirmishers, since later on it is reinforced? Would it not be better to put all these rifles into line from the beginning and secure to ourselves fire superiority as early as possible?"

Thus we come, about 1895, to moving whole battalions in single rank, without intervals between the men. Words are juggled with; we call by the words "skirmishing line" a line whence even anxiety about the "dressing" is not absent, and where the men have nothing of that freedom and that initiative which characterised the skirmisher in 1794, in 1806, and in 1859.

At the same time that the Regulations of 1894 prescribe linear formation for the fight, the tacticians who lay down the law at that same epoch impose on us "decisive" attacks by brigades or divisions in mass.

Offensive spirit, preponderance of fire, all the

major lessons of the war have been remembered. Only there has been forgotten this established fact, so clearly brought out in the Report of 1875 to the Minister: "*Troops massed in column, or in line in close order, can no longer manœuvre, fight, or even remain in position under fire. . . . In consequence of the destructive effects of fire, such formations no longer afford even the assurance of solidity nor that aid in maintaining cohesion and facilitating control of the men by the commander which they formerly did.*"

"There then arose," says General Kessler, "a new school, extolling dense formations, not only for marching and manœuvring, but also for the fight itself.

"A complete military technology implanted itself in modern teaching, which has had the pretension to discover formulæ guaranteeing success, and delights in the use of sounding phrases, such as: 'troupes de choc,' 'masse de manœuvre,' etc., etc.

"The influence of these innovations has made itself felt even in the transformations which our manœuvre regulations have undergone. . . . The teachings of the past are completely forgotten, and certain treatises on infantry tactics, reviving old methods, proved impracticable by the experience of recent wars, have come to consider the column as a possible fighting formation for the troops labelled '*for shock action*,' and called on to carry out the 'decisive attack.'

"Fire, with its brutal realism, will very soon put all these things right, and will blow away in

smoke all these fine theories about the employment of masses.

"*Officers who have not made war* readily grant that a body of troops which is energetically commanded ought to overturn all obstacles; they *ignore the fact* that fire, besides the losses which it inflicts, exercises a depressing effect which is the more intense according as the losses incurred are produced more rapidly. . . . The first line companies will perhaps reach the enemy's position, but the compact columns which follow them, far from bringing them the help of a strength *which may not be necessary to them*, run the risk of entailing general disorder and bringing about a disaster owing to the fearful losses which they will suffer."

Thus spoke the real *masters*, those whose clear minds, vigorous talents, and experience gave them the right to command. One knows, moreover, that attacks in mass were not even anachronisms, for they were never crowned with success at any period.

§ 4. THE TRANSVAAL AND MANCHURIA

(*a*) *Artillery*

From the point of view of the combat, it might seem natural to study in succession the two wars of the Transvaal and Manchuria, which have given rise to such diverse lessons. But this is not so, since we find in these two wars an organised series of experiments, and circumstances, now grouped, now separated, just as the wisest

scientific method would arrange them in order to make the conclusions stand out. For us these two lessons, with their alternations of agreement and opposition, are complementary to one another, and we think it better to study them together. The armament is pretty much the same; smokeless powder, magazine rifles, guns which fire slowly or of which the rate of fire is accelerated, but not quick-firing.

The point on which, perhaps, the teaching is clearest is the use of artillery. We will study it first of all so as to clear the ground for consideration of the more difficult and more important question of the infantry fight. No doubt the guns used in the Transvaal and in Manchuria were without shields and were not equipped for indirect laying, but, in spite of this differentiation from the equipment of to-day, we can easily perceive the essential principles still applicable in the employment of artillery.

In the Transvaal artillery gave only a trivial support to its infantry. It was present only in inadequate quantity: two and a half guns per 1,000 men on the British side and one and a quarter on the Boer side. The British, conforming in this to the principle adopted by all European armies since 1871, laid great stress on artillery preparation of the attack: for long hours and even for whole days they shelled the *presumed* position of the enemy, who gave no sign of life or held his peace as if he had been compelled to do so. The artillery ceased fire when it considered its task completed. According to the British

generals, it ought to have so shaken and exhausted the enemy that the latter was ripe for assault. The infantry had hardly begun its movement when the batteries ceased firing; at most the first line was 500 or 600 metres from the enemy. A few moments later the latter began a terrible fire, and proved that the result obtained was negligible.

In Manchuria the situation is quite otherwise: the number of guns exceeds three and a half per 1,000 men and their employment is absolutely different. So far from abandoning its infantry when it enters on the decisive phase of the attack, the Japanese artillery (after Liao-Yang) continues to fire right up to the last minute, right up to the moment of the hand-to-hand fight, even at the risk of making victims in the ranks of its own infantry, as happened several times. Here is the essential point; the artillery maintains its fire, with a growing intensity, right up to the moment when the infantry assaults the enemy with the bayonet.

The second point to note is that if the Japanese, as we have just seen, practise inter-communication and co-operation between the arms to the greatest possible extent, they do not for all that come to the conclusion that the artillery should continually mix itself up with the infantry fight, and take as its principal target the hostile infantry. Experience has shown that this is not the best way of helping one's own infantry.

"Artillery fire," says a Japanese instruction published after the first battles, "is only directed against the enemy's batteries. The whole of the

artillery seeks to enfilade them or take them in reverse so as to extinguish their fire rapidly. . . . Even in such conditions it will take a long time to reduce the hostile artillery to silence. So at first one devotes the bulk of the artillery to fire on the enemy's artillery; one only uses a portion of it against the infantry." Later on the proportions are inverted and when the enemy's batteries have been more or less silenced, one proceeds to the preparation of the attack. Then, says the instruction, "the artillery takes up a more forward position; . . . the point of attack being known precisely, the bulk of the artillery opens fire on this point, the remainder fires on the enemy's batteries. The infantry begins to move forward. . . . The progress of the infantry and the fire of the artillery should be regulated on one another. When the infantry is about to assault, the artillery changes its objective and engages the hostile artillery with the bulk of its guns; the remainder beat the ground beyond the point of attack."

Thus there is *no permanent task*; the batteries fire in turn on artillery and on infantry.

After the first battles, Japanese and Russians recognised the necessity of covering themselves from view completely, and as they hardly ever found any crest-covered positions enabling them to bring fire to bear on infantry at short range, they had to choose between exposed positions where the batteries sacrificed themselves without rendering any service, and distant positions whence the view was restricted and the fire of but small effect.

To accompany infantry in attack and in defence, recourse was had to machine-guns, easy to carry and to hide even in the firing line. Few in number at the beginning of the war they proved themselves so useful that both armies continued adding to their number.

Large-calibre howitzers, which had been of but little assistance to the British in South Africa, were much appreciated by the Japanese, though we do not know exactly what material effects they produced.

In the first engagements, and notably so at the Yalu, the Japanese artillery had an overwhelming numerical superiority: 258 pieces to 46, 200 to 88, 144 to 16. It was, therefore, like the German artillery in 1870, able, without any difficulty, to give most effective support to its infantry. From Liao-Yang on, the two hostile artilleries were pretty well equal; and moreover they had completely renounced the use of exposed positions. From then on, there were no more decisive advantages.

"Invisibility," says General de Négrier, "has become an essential condition: that is the outstanding fact of the whole war. When batteries allowed themselves to be seen, or when their emplacements were located, they found themselves in a few moments so knocked about that it was not possible to withdraw them from the battlefield. For the most part it was necessary to keep the teams under shelter at 800 to 1,000 metres from the batteries. . . . Battery commanders were frequently obliged to remain far from their guns.

Often the Japanese observers climbed trees, whence they communicated verbally with the gun detachments, or again they went forward to the crest masking the battery and were linked up with it either by telephone or by signals made with flags or discs." [1]

Let us add, on the subject of the difficulties which artillery fire presents, that on comparatively narrow fronts like those of Froeschwiller and Gravelotte, batteries were pretty well obliged to occupy certain crests between determined limits. It was then possible to shell these compulsory positions without wasting ammunition too uselessly. This was not the case in Manchuria. Russians and Japanese spread themselves over very wide fronts; the guns were scattered along them, leaving considerable empty spaces, and it was difficult to hit them by systematic searching.

Thus it was proved that to-day "a well-concealed artillery can engage a numerically much stronger artillery without getting itself crushed, and can lead the opposing artillery to waste its ammunition." [2]

The Japanese did not range with time shrapnel; the Russians on the contrary did so invariably. The advantage rested clearly with the old method of fire, and with the unhurried and accurate ranging practised by the Japanese.[3]

The Japanese declare that they suffered little

[1] *Revue des Deux Mondes*, January 13, 1906.

[2] General W. de Heusch, *Journal des Sciences militaires*, May, 1908.

[3] "British Officers' Reports," vol. ii. pp. 216–218, 572–575; vol. iii. pp. 216–220.

from the Russian shrapnel during the attacks, but that they suffered enormous losses whenever a body of troops in close order, even a mere company, exposed itself in the open at long range.

The Japanese infantrymen could escape the hail of shrapnel bullets if they were warned of its imminence by the ranging rounds; if the *rafale* was loosed without preliminary ranging, the small body fired at was pretty well annihilated.[1]

The Japanese gunners for their part tried to avoid attracting the attention of their enemy by long-drawn-out ranging. They used every means of getting the range before firing, and above all made use of their maps. However imperfect these were they did them good service.[2]

All this information, reported with quite remarkable unanimity by the military attachés, gives one the impression that the task was complicated and the results achieved poor. Yet the British military attachés are struck by the decisive importance of artillery.

"The greatest impression made on me, and on which I cannot insist too strongly," says Major Hume, "is that of the preponderating effect of modern artillery; it does not seem to me exaggerated to say that, in the actual conditions, artillery is the decisive arm, and that the others are no more than its auxiliaries." [3]

[1] Captain Duval, "Conférence sur l'Armée japonaise faite à l'École supérieure de Guerre."

[2] "British Officers' Reports," vol. ii. p. 596.

[3] *Ibid.*, vol. iii. p. 209.

(*b*) *Infantry—the Attack*

One speaks habitually of the war in the Transvaal as if the Boers had come out of it as victors, and one is given to contrasting the reverses suffered by the English in Africa with the successes of the Japanese in Manchuria. One must not forget, however, that the Boers were beaten by the English. This defeat of levies, due indeed to superior numbers, but above all to lack of discipline, cohesion, and offensive spirit, was inevitable, in spite of excellent natural qualities and favourable conditions at the outset, and contains the first and the most important lesson of this war. It is not for the empty pleasure of composing pompous aphorisms that at the head of one section of the Regulations is written, "The offensive alone can procure decisive results," and at the head of another section, "Discipline is the main strength of armies." Never has the truth of these precepts been more clearly demonstrated than in the Transvaal. The Boers at the beginning of the war are more numerous than the British; the situation is made altogether favourable to them by their knowing the ground and being accustomed to it, by the sympathy of the inhabitants and the proximity of their resources. In the first engagements they obtain successes by surprise which place at their mercy bodies of British troops, but they never derive any advantage from it.

At Modder River, for instance, on November 28, 1899, they succeed in enclosing Methuen's

troops in a semi-circle of fire, and keep them lying there during five dreadful hours (the temperature was 43° Centigrade), but they never dream of outflanking them and attacking them. The fact is that no attack is possible without an organised movement, without a dominant will, without commanders whose authority is recognised and whose orders are obeyed; and that there is none of all this in these bands of free citizens, too free to follow blindly one of themselves. So much liberty cost them their independence.

The Boers were brave and were good shots; one must not, however, exaggerate anything: their skill in shooting hardly excelled that of good European infantry; as to their courage, it did not prevent them from keeping one eye on their horses and a thought for their families, and from never waiting for the assault. There was nothing in all this, whether from the point of view of the shooting or the fighting worth of the individual, which ought to have stopped the steadfast British infantry. At Modder River, after all, it found itself within effective rifle range of the enemy, in a position which as a rule one only reaches after prolonged and painful efforts. It could, so it would seem, continue to fire and resume the forward movement in conditions as favourable as those of the Japanese when they arrived at short distance from the Russian trenches. But there was a profound difference between the two cases: the Boers, spared by the British shrapnel, had kept an unimpaired morale and a perfect coolness which was at once heightened by the success of

their surprise; nothing, therefore, compensated the British for the advantage which the defender drew from his position and his entrenchments. When the Japanese arrived at close range, the Russians, on the other hand, had already been shaken for a long time by a combined fire of artillery and infantry.

To this let us add that with certain exceptions the Russians shot indifferently, whereas the Japanese shot well, and we all realise why the situation of the British, at a short distance from the Boer trenches, was markedly inferior to that of the Japanese when they had got to within a few hundred metres of the Russian trenches.

At the beginning of the war in the Transvaal the British undoubtedly assumed formations which were too dense; but towards the end they had spread themselves out in thinner and thinner lines without obtaining much more satisfactory results. They had changed the form but not the spirit of their tactics. Their first line, originally in two ranks in close order, then in single rank, and finally in skirmishers at a wide extension, none the less retained its linear character. It was a long *continuous* line, *not articulated*, and was under a *single control* without subdivision of command and delegation of independence of action to the leaders of the smaller units. "Our soldiers," said Lord Roberts, "have no initiative; they are not clever at making use of ground, and although good target shots, are not trained to battle shooting." A continuous and even line, no matter what its density, composed of such troops

was deprived of all the elements which could make it active and handy in manœuvre.

Another fault of the British infantry, or rather of its leading in most of the actions in the Transvaal, is its predisposition for shock action and contempt for the fire fight. That is a deadly tendency in all armies; it harmed the French in Spain in the days of the First Empire, the Austrians in 1866, the Russians in the attack on Plevna, the British in this Transvaal war, and the Russians again in Manchuria.

It is a remarkable fact that the British, dreaming only of the hand-to-hand fight, never succeeded in achieving it; the Japanese, practising the fire fight, often got to the hand-to-hand fight, and in it overcame the pupils of Dragomiroff. There is in that, however, nothing to surprise a reader who has followed with us the evolution of the combat from ancient times. In all times the struggle with cold steel has been the final phase, that which confirms the decision, the expulsion of the enemy from his position, and the conquest of the ground; but in all times, likewise, this final consummation has come to those who willed the means *before* willing the end. Attack with pike, sword, or bayonet gives the last shock to the enemy's morale; but to shake that morale and put him at the mercy of shock action the losses inflicted by bow and sling, by rifle and gun, are needed.

Troops led against the enemy with the idea—clearly a most swaggering one—of getting to the hand-to-hand fight as quickly as possible, will

fail in their attack; on the other hand, troops who advance methodically, careful to inflict on the enemy losses at least as great as they themselves receive, may attain the desired end.

The Japanese in Manchuria pushed forward with the greatest determination, but at the same time were careful to note the effect of the fight on the enemy's infantry.

"The first essential to pushing forward boldly," says Major Löffler, "is to feel that the enemy's energy has diminished."

"The Japanese infantry, as a rule, displayed a keen and impetuous wish to close with its adversary, and after the first halt where it had opened fire, it continued its advance rapidly, interrupted by short halts which it used for firing; it continued like this until the enemy's fire became too heavy, and in this way it made good several hundred metres to the front; but its own forward impulse was not enough to carry it right through—it needed the intervention of some outside factor, such as a more numerous artillery or a flank attack by other troops which could not be seriously opposed . . . to enable it to resume its advance. Every time that it could do so, every time that the enemy's fire slackened, the Japanese firing lines resumed their advance without hesitation."

This noteworthy sketch is as clear as it is precise and correct: the essential thing for attacking infantry is to have at the same time the keenest desire to push on and the wisdom not to advance without having felt that the enemy

is shaken. To succeed *it must have an element of superiority*: infantry will scarcely find this in its own fire, which will rarely be more effective than that of the defender, but it will always find it in artillery fire and in envelopment; finally, it requires keen leaders who will carry their units with them. As to the periodical dividends to be drawn from reinforcements and supports, which our regulations from 1875 to 1895 made the keystone of their arch, they come last of all.

This, in truth, is what, in the combats in the Transvaal and Manchuria, is essential and most concerns the spirit and soul of fighting.

But while admitting that the question of formations has been too much dwelt on it must not be neglected. A vicious formation kills the spirit, or at any rate hampers it.

We have indicated briefly what were the British attack formations in the Transvaal; always a line, of infinitely varying density indeed, but continuous, unarticulated, and without supports.

The Japanese in Manchuria made use of methods seemingly the most diverse; the density of their skirmishing lines varied extremely, their rushes were from twenty to one hundred and fifty metres in length. They sometimes crossed vast spaces without firing a shot, while sometimes they maintained their fire for several hours together.

In broken ground one saw fairly thick skirmishing lines (one pace interval between men) making eighty-metre rushes by whole companies.

The supports, local reserves, and reserves were usually formed in small columns of about fifty men, and deployed when they had to cross an exposed zone. The advance was hardly interrupted, and the assault was begun at 300 metres from the enemy.

In flat country different precautions were necessary. The firing line was very thin (five to ten paces between men) at the outset. It made rushes of twenty to thirty metres by groups of twenty to twenty-five men. Every group had its leader who led it towards its point of attack without being bound to follow the direct line of approach.

Halts and fire were prolonged as much as was necessary. At 600, 500, or 400 metres there usually occurred an enforced halt, more or less lengthy, with a sustained fusillade. A thick firing line was built up there, movement resumed as soon as possible, and then the assault. Sometimes the assault succeeded; more often it failed, or even was not attempted, the attackers having become exhausted.

Both British and Japanese tried to use night as a help in their attacks, and it is a remarkable thing that we find in their use of darkness the same difference as in their use of artillery. The British tried to use darkness, as they did guns, before their attack; the Japanese essentially had recourse to it for the last phase of the attack. At Modder River and at Magersfontein the British at dawn got to about 600 to 700 metres of the enemy in the belief that they would surprise

him; but as they have not covered themselves with reconnoitring patrols or scouts it is they who are surprised by the crushing outbursts of Boer fire. The absence of scouts and lack of precaution pushed to an extreme degree do not admit of a judgment being formed on the value of this mode of action, which, after all, did get a thick line forward to effective range without moral or material wastage.

The Japanese sometimes did the same; without obtaining a surprise effect, they at least had the gain that the defender's fire was not so deadly as in broad daylight. In this way they got to 300 metres of the Russian trenches and at once dug themselves in. When day came, they opened the fire fight in conditions of quasi-equality with the Russians.

Usually the Japanese operated by night, not to begin but to finish the attack. Once or twice they even succeeded in doing both in the same night. In any case their night attacks were not carried out according to the methods hitherto extolled. They had not the character of small "coups de main," but were great operations undertaken by whole divisions.

They admitted of infinite precautions: minute reconnaissances; numerous itineraries laid down in the greatest detail; patrols preceding the companies; pre-arranged signals; and innumerable means of maintaining intercommunication. Usually one is advised to use close formations, such as company columns, for night attacks. The Japanese on the contrary deployed their first-

line companies into single rank, only keeping the reserves in columns.

(*c*) *Infantry—the Defence*

Both the wars in the Transvaal and Manchuria show this characteristic: that one of the two adversaries remains pretty constantly on the defensive. They therefore admit of our studying the defensive fight fairly completely.

The Boers astonished the world by the small depth of their lines. Not being numerous they had to choose between two solutions: occupy extremely narrow fronts with the depth normally admitted heretofore among European armies, or else hold extended fronts in small depth. Trusting in the accuracy and rapidity of their fire, they adopted the second solution and they were justified by events. At Modder River they had 3,000 men on a front of 7 kilometres; at Magersfontein 5,000 men on 10 kilometres; at Colenso 4,000 to 5,000 men on 12 kilometres, etc.—that is, one man for two or three metres of front. These fronts could not be pierced anywhere.

The Russians, with a much greater depth, did not offer to the assailant a greater resistance. Perhaps they shot less well; but undoubtedly their exaggerated depth did more to hamper the effect of their fire than it did to increase its volume.

Boers and Russians entrenched themselves with care on their positions; the Boers did so more skilfully, with fire trenches of bottle-shaped[1]

[1] That is to say, wider at the bottom than at the top, which was made possible by the exceptional stiffness of the soil.

profile, which sheltered them from shrapnel. It is quite certain that but for the trenches in which they sheltered from the artillery projectiles while waiting for the time to fire, neither would have been in any condition to offer the assailants the prolonged resistance they did.

Wire entanglements in each case rendered very great service to the defence.

The Boers, furnished with admirable intelligence, and kept well informed by scouts, showed themselves very superior to the Russians in obtaining information, and in scouting. The latter were often surprised by the Japanese night attacks.

All things considered, in the frontal fight the attack has rarely been able to get the better of the defence. In the Transvaal, the British, even when their formations had become more rational, never succeeded in beating down the Boer resistance otherwise than by manœuvre. In the first part of the war, not only did they not take the enemy's positions but they were driven to retreat.

The Japanese, naturally, obtained very superior results. They always got up to assaulting distance, and, although the defender usually had the advantage of numbers, they threatened him so sternly, and held him fast so firmly, that the Russians were never able to withdraw a man from their first line. The Boers, on the contrary, who never had any reserve, were able to counter the turning manœuvres of the British by making drafts on their firing line, which was not kept busy enough by the enemy.

It is stated that the Japanese did succeed in frontal attack. This point, however, is not yet sufficiently well established. Whenever we have been able to verify this statement, we have found that the evacuation of the trenches had been determined on and almost completed before the assault in order to avoid some threat of envelopment. It also happened that the positions attacked, although situated on the front of the Russian army, were not part of a continuous line, but were sufficiently isolated to offer flanks to the attack.

Moreover, taking the great battles in Manchuria as a whole, it seems that there victory is decided, not by a success on the front, but by a turning or enveloping movement. As in 1870, fronts seem to have been inviolable.

CHAPTER III

THE MODERN COMBAT

§ 1. PRELIMINARIES OF THE MODERN COMBAT

We have passed in review the various forms which the combat assumed from the most remote days of classical antiquity down to the wars in the Transvaal and Manchuria. It remains for us to study in rather more detail what the modern combat may be. Our data being borrowed for the most part from the two last wars, some of the observations which have already figured in the preceding chapters will reappear.

The preliminaries of the combat, which two centuries ago were non-existent and which amounted to very little even a hundred years ago, have developed considerably since long-range weapons and smokeless powder have been adopted. When Frederick II. drew near a hostile army it was enough for him to have it kept under observation by a few hussars ; he examined it personally with the greatest ease, and when finally the troops marched to the encounter they showed themselves at distances which were beyond the range of weapons.

Later, in the wars of the Revolution and the

Empire, generals could still see the enemy's army either wholly or in part. Observation was, however, rendered a little more difficult than in the days of Frederick by the use which was made of cover and of *points d'appui*, and by the distribution of armies over a wider area. When the armies attacked each other, the skirmishers opened the fight, but at so short a range that the troops of both sides could see each other long before they began firing.

In 1870 it became more difficult to locate precisely the enemy's position. The cavalry had to explore the approaches, pushing on at each point until they were fired upon. When the actual fight began, the guns and the skirmishers opened fire without there being occasion for other preliminaries.

Long-range weapons and smokeless powder oblige armies to observe greater formality. When the cavalry, received by rifle shots, is obliged to stop, it as yet knows nothing about the main body of the enemy's troops; it does not even know whether behind the outposts which stop it there are big detachments, or whether it is merely up against a screen. It is necessary that infantry reconnaissances should come into play, probing the enemy's posts, and trying to pierce through them. Efforts are made to find the extremities of the hostile front. In the case of armies which are small in number, as they were in the Transvaal war, these efforts may succeed, but with the enormous armies which obligatory service provides it is necessary to reconnoitre on a front of 300

kilometres or more, and one does not succeed even then. It is necessary to attack before knowing what one will meet except from the reports of spies and balloons. The situation is no longer the same as that in which the soldiers of Frederick II. found themselves, for they saw the whole of the enemy's army long before attacking it. At length the enemy's posts are dislodged; the cannon of both sides speaks, the infantry advances. It is obliged to assume fighting formation about six kilometres away from the supposed position of the enemy's artillery. Not only do we know that these guns have an effective range of 5,000 metres, but we also know that the heaviest losses inflicted on infantry by artillery have been effected at long ranges when the companies still thought it safe to march in close order.

From this moment it is no longer possible to advance over the exposed zone except in skirmishing order. Frontal reconnaissance goes on; it only ceases with the assault. The ground can only be put to good use if it has been reconnoitred beforehand, say the German Infantry Regulations (305). Patrols of scouts search the ground, studying the approaches covered from view of the enemy, discovering his ambuscades, and reporting the exact position of his posts and firing line. During the last phase, some scouts still crawl forward in front of the line, reconnoitring every detail of the ground, and report the position of accessory defences.

This business of reconnoitring, these gropings

which begin several miles from the enemy's position, last for long hours, sometimes even for days. It is the first act of prolonged battles such as Liao Yang and Mukden. The example of the English in the Transvaal shows how indispensable is this phase of preparation.

§ 2. GENERAL PRINCIPLES OF THE COMBAT

The object of the combat is to destroy that part of the enemy's forces which is in front of one. This result is never arrived at without a pursuit immediately following on the fight. It is in retreat that the breaking up of the enemy and his demoralisation are effected. It is a question of bringing about this retreat, this breaking up, this demoralisation, by dislodging the enemy from the position he is occupying. One has to make him feel the force of a material, mental, and moral superiority which will shake his confidence.

"The fact of obliging an enemy to give up the ground he is occupying is the only certain sign of success. To conquer is to advance."[1]

It is only infantry that can dislodge the enemy. Cavalry does not charge under fire from modern weapons, and artillery does so even less. The whole fight should, therefore, be conducted with a view to assisting the advance of the infantry up to the hostile position. It is not likely that an adversary, even though in small numbers and of quite ordinary quality, would evacuate the

[1] Comte de Grandmaison, "Dressage de l'Infanterie en vue du Combat offensif," p. 5.

position he occupies until he is hunted out of it by the butt or the bayonet. Fire will often oblige him to hide himself, but not to clear out. We must, therefore, anticipate that the fight will end in an assault or in the menace of an assault pushed almost home. It is the final act of the fight, the climax, but it is not the most important act. As we have already seen in the battles of antiquity the frontal fight with the *arme blanche* results in nothing.

Let us suppose the impossible; let us assume that modern infantry succeeds in avoiding the fire fight and arrives near enough to its adversary to charge, that will not be a sufficient reason to anticipate that it will drive that adversary back. It must not only obtain contact with the enemy, but it must then possess a powerful element of superiority. This can only be acquired by fire, which, since the sixteenth century, has alone made it possible for the offensive to have some chance of success in a frontal attack. At Marignan and Pavia fire tears the heart out of the masses of the enemy and allows the infantry to throw itself into the gap. At Fontenoy the English infantry succeeded by its fire superiority in making a breach in the French lines, but when it tried to penetrate *en masse* it was in its turn destroyed by fire and routed. At Friedland the artillery made a breach in the Russian masses.

The assault consummates, but it is fire which produces victory, when it is not due to some extraneous cause. "The offensive consists in bringing the fire nearer and nearer to the enemy

right up to the shortest ranges. The bayonet attack confirms the victory gained over the enemy." [1] Thus in the modern fight it is a question of bringing the infantry to assaulting distance, but it must not be thought that this should be done by avoiding the fire fight. The advance of the infantry has for its object as much to bring it to within good rifle range of its adversary as to bring it within good assaulting distance.

Fire has not only for its aim to assist the advance; though without it the advance would only end in a check. Advance and fire support each other reciprocally as all historical examples demonstrate. Those who count on dislodging the enemy by fire alone are greatly mistaken, and it is no less serious a mistake to wish to assault unbroken infantry with the bayonet or the sabre. History proves that when men have sought for shock action and lost sight of the proper value of fire it has always led them to disaster.

Already a century ago [2] Napoleon said, "Battles to-day are decided by fire and not by shock action."

All this discussion may at first sight seem quite academic; but it will presently help us to elucidate the complicated problem of infantry attack. This problem has become infinitely difficult because of the conditions imposed by the efficiency of modern arms. The greater the distance

[1] "Règlement de Manœuvre de l'Infanterie allemande," p. 324.
[2] "Correspondance," t. xxxi. p. 464.

at which the attack begins, the greater the danger that has to be faced and the terror that has to be surmounted; the more one would like to keep one's men in hand, but on the contrary the more one is obliged to disperse them. In the seventeenth century it was possible to lead a solid army to the attack; under the First Empire it was still possible to move battalions in columns; from 1870 on it was a question only of sections, or of half-sections in close order, and now, since quick-firing and smokeless weapons have been adopted, extended order is the only order admissible. It is an obligation we all have to accept. No doubt efforts will be made to maintain close formations as long as possible, that is to say, as long as one can find cover, but as soon as it is necessary to push on over open ground one will be obliged to extend into skirmishing order.

The problem with which we ought first to occupy ourselves is just this: How can one best get a body of troops in open order to advance over exposed ground to the attack of an adversary who is in position? Once this first point has been considered it will be easy to pass on to the attack over ground affording more or less cover, to encounter fights, etc. In placing ourselves at the point of view of the attack we shall at the same time see how the defence should be conducted. Above all, we must convince ourselves that certain conditions are indispensable to the success of a frontal attack on an enemy in position. Such a success, if we are to believe history, is very rare, so rare that a general would

be mad to seek deliberately for victory through a frontal attack. But there are cases in which such attacks have succeeded. One cannot regard them as condemned to failure; but one must not imagine, given two bodies of troops facing each other, in every respect equal, the one on the defensive, the other attacking, that the latter will have any chance. It is absolutely certain, as Clausewitz and Moltke say so clearly, that the defender derives a very real superiority from his form of action; he has assured to himself the advantage of position: he is in shelter and aims better and more quietly than his assailant. These advantages are great, and other very great advantages are needed to counterbalance them. If the forces of the assailant are but equal to those of the defender he will not be able to dislodge him.

What elements of superiority may an assailant have?

1. *Numbers.*—These have but little influence. Against a position occupied by troops in no great depth—as, for example, the Boer positions at Modder River, Colenso, etc.—the assailant could never gain the advantage in a frontal fight, even if he had five times the number of men. His fire would lose in quality what it would gain in intensity.

2. *The amount of artillery.* — This second factor is much more telling, especially if the superiority in artillery is very great and the ground allows of the effective countering of the artillery of the defence, of putting it pretty

well out of action. As a general rule it would be very rare on a given front for an assailant to have very superior means at his disposal and to be able to employ them simultaneously to crush the defence.

3. *Individual worth, moral worth, and technical ability.*—Here at last we find the factors of a very real and very telling superiority. If the defender and the assailant differ notably in moral worth, success is to the more energetic, and this without it being necessary to call in the help of a flank attack.

Technical skill produces the same effects. In an infantry combat the skill of the marksmen increases the effect of the fire tenfold. When this is combined, as is so often the case, with superior moral worth, it assures victory in a frontal fight. Technical superiority in the matter of artillery is even more valuable: of two forces of artillery in all appearance equal, one may be quite useless and the other may exercise a great influence on the infantry fight.

If the artillery of the defence wastes its ammunition by pouring it haphazard over the ground on the pretext of neutralising that ground, while the artillery of the assailant hits hard and true, first the defender's artillery and then his infantry, till the very moment of assault, it will gain a very pronounced and possibly decisive advantage.

Taking all in all, we shall rarely, if ever, find very marked differences in moral qualities and technical skill between European armies.

It will be extremely difficult to put superiority of numbers to a good use. The only decisive advantage which the assailant can have is a numerical and qualitative superiority of artillery, and the experience of 1870 proved that this in itself is not enough.

Must we then, in spite of pessimistic conclusions, renounce vigorous attacks and content ourselves with simple demonstrations upon the hostile front? This is no more so to-day than it was two thousand years ago. While we are struggling desperately along the front, while we compel the defender to remain there in strength and resist us with vigour, we hope that the guns will make themselves heard behind him, and that, shattering his courage, they will oblige him to retreat and to take improvised decisions. Then we must be ready to spring upon him so quickly that this last assault seems but the natural consequence of what has gone before, so that to us may be the glory of having carried his positions, and to him the shame of having lost them. Without leaving him time to re-form, let us follow him at once while he is crossing the open spaces where he will neither be able to turn and face us nor preserve his fighting formations. This is why we must at any rate push home the attack as vigorously as if it were certain to succeed. If it is the outflanking movement that is productive of victory, it is the frontal attack that reaps the moral fruits of victory, and it is by prolonging it as a direct pursuit that one obtains great results.

§ 3. FEAR

Ardant du Picq showed how the mechanism of the ancient combat was founded on a perfect knowledge of the human heart, and he asks for modern infantry "some way of fighting which shall be in keeping with its weapons, and with what may be demanded of the physical and moral powers of man."

Prosaic as it may appear, we must first reckon with armament – the material factor—and no argument of the moral order can prevail against it. The experience of wars since 1866 has amply demonstrated that it is impossible to advance in close order under fire. This is an established fact which there is no gainsaying. It follows that in studying the different phases of the combat we shall have to introduce less general notions as to the effect of armament.

Moral factors exercise an enormous influence on the fight; it is on them that we must base the details of the method of fighting, and we are about to try to do so. As far as the physical strength of men is concerned, the test to which it is put in the fight is only severe because of the nervous exhaustion which emotion produces; and this brings us back to moral factors again.

Among these the first and unquestionably the most important is fear.

"To risk life at every step for hours together is no fun for the ordinary run of men; also, whatever the foe opposing him may be like, the man in the fight has but one enemy, and that

an enemy of which he speaks very reluctantly—*i.e.* fear." [1]

Various sentiments, natural qualities, passions, and acquired habits fight against fear, such as native courage, confidence in a leader, patriotism, esprit de corps, discipline, etc. One must also reckon with everyday feelings such as confidence or discouragement, and with the qualities proper to a race or to a category of men. Fear as it reveals itself in a man fighting is a sentiment or rather a special moral and physical state. There is fear and fear. The handful of old soldiers whom a colonel found on the day of Solferino squatting in a ditch and talking quietly to each other had run away from the fight from fear of death, but they remained in full possession of their faculties: they were not a prey to fear as were those unhappy Germans of whom Fritz Hoenig tells, who were huddled together in the bottom of the Mance ravine during the battle of Gravelotte. These were completely panic-stricken and had lost their heads.

But an acute state of fear is rare, without being quite exceptional. We have only to take count of it in order to reduce the effectives of young soldiers going under fire by a tenth or a fifth.

Among those who stick it out there are some who "retch with fear," as Ardant du Picq says. Sometimes they keep it under to the end and go mad after the battle. But the majority can fight down fear at less cost than this.

[1] Colonel de Grandmaison, p. 3.

The young soldier is moved and anxious from the moment he takes the field. He advances into the unknown, never knowing what is going to happen. He is already uneasy to the point of being liable to panic. A loaded horse, a hare crossing the path, may provoke the beginning of chaos in a body of troops. What might not happen if a shot were fired?

As they get nearer to the actual fight, anxiety increases. Vigorous and brave young men, who would expose themselves without emotion to certain danger in peace time to save one of their kind, suffer from apprehension of the fight because they have not the slightest idea what is going to happen. If they suddenly hear rifle shots ahead and are led to the assault against a visible enemy, this painful anxiety suddenly disappears, because there is no longer an unknown; every one knows what is up and will advance with confidence. It is just the same if they immediately engage in a fusillade with a quite visible enemy. These young people are for the most part plucky and well-intentioned; as soon as they see the goal, understand what is required of them, and can measure up the danger, they advance boldly enough.

The assault and the hand-to-hand fight are not what frighten a soldier whether he be inexperienced or no. What makes most impression on him is the long-range fire fight because it is still the unknown, an enemy one does not see, projectiles that arrive from Heaven knows where. One cannot struggle with this invisible enemy;

the danger is immense and is not to be measured, it drags itself out into long hours, and is accompanied by the most horrible din, which produces a violent reaction on the nervous system.

The trial which to-day awaits the man on the battlefield is terrible in a different way from the trial to which the warrior of antiquity was subjected. Ardant du Picq, a good judge in this matter, definitely says : " Let us look more closely at man in both forms of combat. ' I am strong, adroit, vigorous, skilled, full of coolness and presence of mind : I have good weapons and dependable companions ; we see everything clearly, we are alert to take each other's places '—that is what a legionary might say to himself in going to the fight, and he would charge confidently. To-day, no matter how strong, determined, skilled, courageous I am, I can never say : ' I shall come out of it. I have no longer to do with men ; I do not fear them, but the fatality of cast-iron or lead. Death is in the air, invisible and blind, accompanied by terrifying gusts which cause me to bow my head.' "

§ 4. THE REMEDIES FOR FEAR

The fear which seizes the combatant on the threshold of the battlefield and grows in him owing to the excess of danger, is not the fear of death only but is a moral and physical state in which uncertainty and apprehension of the unknown play a large part. We may obtain appreciable results if we familiarise the minds of the men with what they are going to see, some

considerable time before the action, and above all when the combat is drawing near.

When the combat is drawing near, we shall influence a soldier enormously by setting him an example of calm, by chatting with him unaffectedly, by not avoiding to speak of the incidents that will follow, but by treating them as something expected and normal, if necessary, putting the man at his ease by some joke. The more we can postpone the moment in which the soldier, left to himself, becomes once more silent and uneasy, the less chance will there be of his becoming a prey to fear, and the less time will fear have for tormenting him.

But sooner or later the moment comes when we are obliged to hurl ourselves into danger, to abandon close formations, sections even, and to extend into skirmishing order. From this moment the soldier is left almost to his own devices.

How shall we give ourselves the best chance of leading him up to the enemy in a state in which he can beat him?

We ask two things of him—to advance and to shoot. Fear makes him shoot badly and prevents him going forward: it must be got the better of.

Immobility, physical, moral and intellectual stagnation, surrender a man unreservedly to his emotions, whereas movement, work of any kind, tends to deliver him from them. There is every reason to keep the combatant moving, to avoid those halts which are not absolutely imposed by the intensity of the fire, and to force the pace.

One must let the men shoot. "It is," said Ardant du Picq, "the safety-valve of fear," and it must be opened in order to avoid an explosion. To attempt to restrain fire on grounds of discipline is a false step, and vain into the bargain. Volleys and fire by a named number of rounds are but deplorable expedients which only augment the tension of wills fighting against fear, and soon cause the limit of the elasticity of the human machine to be reached.

Let them shoot. To advance we must make our own skirmishers run as the Japanese have set us the example. This is also a remedy against fear. The more rapidly a man moves and the nearer he feels he is getting to the enemy the more does the keenness for the fight develop in him, the more does boldness dominate fear. In his excellent book "La Garde mobile en 1870"[1] M. Thiriaux enumerates all the circumstances in which our improvised troops showed a courage and a value worthy of seasoned troops, and they are almost always cases in which they have been led forward briskly at a racing pace. Therefore, let them shoot every time they are obliged to halt, push the advance forward, carry it out running, and with the shortest possible pauses.

These pauses are necessary if only to get breath; running in ploughed fields, together with the emotion that grips the chest, soon makes a soldier out of breath. Besides, the defender may produce a fire so intense that it is absolutely impossible

[1] Brussels, 1909.

to advance. We must wait till he tires, and fire at him as much as possible in order to disturb his peace of mind. When he fires less rapidly and more badly, we can rise and run on till want of breath and the fusillade impose on us a new halt. The less the pauses are prolonged, the easier it is to make men get up and push forward.

If we cannot surround the young soldier with a large body of seasoned troops the only way to put heart into him is to give him *a support* a little distance in rear. It is on this principle that Napoleon wanted to carry back the third rank of his infantry 20 fathoms to the rear. This was also the principle of the manipulary legion.

In our days when very attenuated lines are the only formations admissible under fire, we must always have behind the first line other analogous lines, of less density perhaps, so that the first may feel itself backed up. And for these lines to fulfil their rôle they must not all go on and melt into the firing line. A propos of this, an excellent officer, who had been through all the wars of the Second Empire and the war of 1870, says: "Every man should be able to see a little way behind him a body of troops which is following him and backing up his movements. He gets great confidence in this way and will be brave far more readily. In several critical situations I have heard the following reflection in the mouths of the men: 'There is no one behind us.' The words circulated from one to another, anxious heads were turned back, almost inevitably dash

faded away. We must make no mistake about it, skirmishers thrown forward know very well that they are called upon to suffer great losses, they are aware of their mission of sacrifice, and they will only accept this sacrifice voluntarily so long as they see it is not useless, and that quite close to them are people to help them, to avenge them if they fall, and who at any rate are in a position to profit by their efforts."

The regulations of 1875, which were drawn up by men who had made war all their lives, distinguished between the *renforts* intended to join the firing line, to fill gaps in it, and the *soutiens*, which were to remain in rear as long as possible, and which were meant to produce a moral effect on the first line from a distance. All these successive lines, the first as well as the rest, must be widely extended. Comparative isolation is good for the morale of a man from the time he finds himself in the zone of fire. If men are close to each other emotions are transmitted and hyper-excitement is reciprocally induced—this is very bad for the steadiness of the combatant. As Ardant du Picq says: "The marksmen who are farthest away from one another will become less dazed, will see more clearly, will be easier supervised, and will for these reasons shoot better." If the intervals are large, the man who falls has plenty of room, is seen by a less number of people, and drags no one down in his fall; the moral impression made on his comrades is slighter, their courage is less shaken.

Even in peace time at target practice men

shooting shoulder to shoulder become enervated or excited by contact with their comrades and shoot less deliberately. How then would it be in the field? Except in the case of a few recruits lost in a body of old soldiers, one man's fear transmits itself to all the rest. The slightest movement of fear will put to flight a whole body of men through that contagion of fear to which any crowd is liable through the tremor which a moral shock produces in the nervous system of all the men composing it. To each man his own fear is enough. If alone, he fights against it: he feels a sense of responsibility, an obligation not to be a coward in the eyes of others, an obligation which disappears when he feels that the others are as terrified as he is.

We have seen how the tacticians of the eighteenth century, of the Revolution and the Empire, understood the use of skirmishers; they wanted them scattered at intervals of "less than fifteen paces." They would have protested against the formation of "thick firing lines of skirmishers." For them it was a contradiction in terms to couple the words together. It was essential that the skirmishers should be spaced out sufficiently to enable them to act as individuals. The Japanese in the Manchurian war at first tried having intervals of less than two paces between the skirmishers. This interval, as military attachés declare, was gradually increased throughout the war. In the last engagements it was about six paces. Thus they fell back upon the same number of paces extension as in the Transvaal war and

the campaigns of 1792 and 1815. Thus all historical examples seem to agree in advising a thin line of skirmishers with intervals of about five or six paces between man and man.

It will be objected that it is to our interest to cover the enemy's lines with a denser fire. To this objection history also gives a definite answer.

Each time that progress in armament has made us long to cover the enemy with a hail of bullets we have tried to form skirmishers in rank entire, then experience has brought us back to the use of widely extended skirmishers, whose shooting we know to be more effective than that of serried ranks—whether dressed or not. That which was true in the days of Pericles, of Montluc, of Napoleon, is also true to-day.

Everything in war is a matter of morale, but morale is primarily open to the impressions of physical phenomena. The fusillade would have no moral effect if it were never deadly. During the last minutes which precede the assault we may be satisfied if we get an intense though ineffective and undisciplined fire with which to stun and terrify the defenders, but we must have shown them first that bullets often kill. We have to obtain a murderous, effective, sustained fire in order to produce both material and moral results. It is through the efficient shooting of the skirmishers that the preparation for the attack is made with a reasonable expenditure of ammunition. In this there is an apparent paradox: will twenty skirmishers on a front of 100 metres

produce as great an effect as a hundred men shoulder to shoulder? This was the great discovery of the eighteenth century, a reaction from the error of the seventeenth century. And we have seen how under the First Empire for men to be considered skirmishers it was not enough for a body of troops to be formed up without dressing; to act as skirmishers it was necessary for them to have large intervals between men and complete independence of action.

Numerous Prussian reports on the battles of Jena and Auerstadt confirm the value of skirmishers' fire and the harmlessness of file firing. Duhesme tells us also of an Austrian battalion which lost but three or four men from the sustained fire of a French battalion at 100 paces, while the firing of a band of skirmishers 300 paces away killed more than thirty in a few moments.

It is not by thickening lines that one obtains "fire superiority." This expression is employed in a very loose way since the assailant can never in any way get a superiority of infantry fire over the defender. He can only make him feel that he is not sheltered from danger. He produces not a superior fire, but sufficient fire to engender fear.

§ 5. GROUPS

Some officers consider that unity of action is more easily attained if the skirmishers form long continuous lines. Others prefer to divide them up into small semi-independent groups. The

teaching of history does not allow us to haver in this matter. It has always proved impossible to get homogeneous, invertebrate, linear formations to move, to push on. Armies which are really quick at moving to the attack or at manœuvring have always been divided up. It was so with the Roman legion, and the question was settled when the French tactics of the eighteenth century, the tactics of small columns, superseded the linear tactics of the preceding age.

The vaunted "thick line of skirmishers," that is to say the continuous firing line of men shoulder to shoulder which it was desired to impose on us fifteen years ago, was still a form of the linear order. It had the same faults as had the line of battle of the eighteenth and nineteenth centuries. The war of 1870, if we take the trouble to examine it, affords us some very striking illustrations of this point. Read the remarkable studies of Lieutenant Tournés[1] on various episodes of the battle of Froeschwiller, and you will see how great was the activity of the Prussian infantry when led forward *by sections*. The lieutenants played their part with initiative, with dash, and their example was valuable because it was displayed to a small number of men.

Then, on the other hand, let us go back to the battles round Metz.[2] Without mentioning those

[1] "L'Attaque du Calvaire—De Gunstett au Niederwald."

[2] "La Guerre de 1870-71," Metz, vol. ii. par la Section Historique de l'État-Major français.

French regiments which, while not lacking in courage, their colonels could not lead forward, we see a similar phenomenon in the Prussian infantry. If the company columns and sections of skirmishers marched and advanced briskly on August 6, it was not at all the same thing on the 18th with the deployed companies. Listen to Fritz Hoenig expounding in his "*Untersuchungen*" the almost insurmountable difficulty that a captain finds in getting his company on to its feet to advance; some men follow him, others cannot make up their minds to do so.

In a long line, commanded by a single leader, the men who are unwilling to advance have most influence. In a small company it is otherwise; the commander leads the best forward, and the rest follow, since they cannot escape his eye or the immediate effect of his action.

Companies of 200 men are too unwieldy for the approach movements in an attack. Skirmishers should be moved by squads or half-sections in view of each other, each group feeling itself supported in flank and in rear. No man under these conditions is liable to the retardatory influence of the body of men around him; but rather yields to the leader's power of sweeping him on.

Most combatants, as we have said, even though not completely paralysed by fear, are not in a state to reason coolly about their actions. Duty must impose itself, as it were, must appear definitely in some tangible form; the gunner clutches on to his gun, but the infantry man has nothing to rivet himself to except his leader.

As Ardant du Picq says, "Control tends to escape from the hands of the supreme commander into the hands of the junior commanders. The certain and inevitable disorder apparent in a body of men in action increases every day by reason of the moral effect wrought on them by the engines of destruction, till in the midst of the hurly-burly and the flowing backwards and forwards of the firing lines soldiers lose their leaders, and leaders their soldiers.

"Among the troops which are immediately and violently engaged *little groups alone keep together.*

"Nowadays when the fight is scattered the soldier no longer belongs to one, and often he cannot be controlled. Whence the necessity arises . . . of making their immediate leaders thoroughly understand what is wanted, where they are to make for, etc."

Men will follow a leader whom they see close to them, whose commands they can hear, whose leadership they can feel. They gather round him, and obey him. The whole line may be advanced in good order if these groups are kept distinct; at certain moments the leaders of larger units may perhaps be able to influence the direction of the groups and combine their movements—a thing that cannot possibly be done with continuous lines.

"It is only the small groups," says Ardant du Picq, "that can keep together, and then only if they are properly constituted, for then they serve as supports and rallying-points for those men who

have lost themselves. By the force of circumstances battles now tend to become more than ever before soldiers' battles. It ought not to be so—we do not contend that it should be so—it simply is so."

Thirty years go by and General de Négrier, who most often of all our leaders was under fire and paid the penalty for it in his own person, also recommends the employment of small groups of skirmishers.

"There is one fact which now dominates close-range fighting, and that is the impossibility to a commander of exercising any control over lines that are seriously engaged. The influence even of the officers who advance with these lines is very restricted. It is hardly possible for them to do more than work upon the three or four men beside them. The fight is in the hands of each fighting man, and never in any epoch has the individual value of the soldier been of greater importance."

Can we fail to be struck by the coincidence between these words and those of Ardant du Picq?

"The fighting front," General de Négrier concludes, "will no longer consist of a continuous line of men firing, but rather of a certain number of groups or swarms, each one led by a non-commissioned officer. In order to gain ground, the officers and non-commissioned officers, having determined which points to occupy, get their men on to their feet and dash forward to lead them. It is the essentially French tactics of 'Follow me.' We owe many

victories to it, and we find that it is no less useful of application in the methods of combat to-day than it has been in the past."

§ 6. THE APPROACH MARCH AND ARTILLERY

The principles according to which the march of infantry on the offensive should be regulated up to the time when it is within effective rifle range or assaulting distance are laid down thus :

"The experience of all wars since 1859 shows that supports, local reserves, and reserves, hasten to push into the first line to ease their nerves by replying in their turn to the enemy's fire. Now the premature coming up into line of all these supports, local reserves, and reserves will, by crowding men into the firing line, result in the suppression of all intervals, and will create in the firing line discomfort, disturbance, nervousness, unhandiness, inertia—all that we have tried to avoid by an organisation of the attack into successive well-extended lines and into distinct groups."

We must therefore try with all our strength not to carry forward into the firing line all the lines that follow, any more than we ought always to keep them back, but we should regulate their progress.

By degrees we must push up into the firing line the reinforcements requisite to maintain its density fairly constant; which means that it must be duplicated by a line of barely equal strength, for the total losses in an attack scarcely exceed 50 per cent. Thus we get back approximately

to the strength laid down for reinforcements by the 1875 Regulations. The bodies which follow are no longer *renforts* but *soutiens*; their task is to give moral support to the skirmishers by preserving them from all dread of isolation.

These supports, echeloned more or less deeply, should not join the firing line until the moment when the latter, having got to effective range, enters upon a more equal struggle with the defender.

It must be noted, in fact, that at long ranges the defender, under cover, can fire with real effect on the exposed assailant, who for his part, most of the time, does not even see the heads and weapons of his adversaries. At ranges of 1,500 and even 1,000 metres the assailant obtains from his fire the advantage of diminishing his own fear, but not of inflicting appreciable losses on the enemy. Having got to 400 or 300 metres he will still be in a position of inferiority vis-à-vis of his adversary, but at any rate he will be able to see him, however well covered the latter may be.

The fire of the attacker will then become an important factor in the demoralisation and material destruction of the enemy.

And it is not the only one. While the infantry has been deploying, the artillery has collaborated for several hours in preparing the fight; its main task has been to beat down the hostile artillery, to do it as much harm as possible, and incidentally to support some minor or partial attacks by the infantry; finally, when the hostile

positions have been well reconnoitred and are clearly defined, when the advance of the infantry compels the defender to show himself in order to fire, the artillery devotes itself principally to shelling the positions of the defence, to hitting the defender, or at any rate to forcing him to go to ground, and *to blinding him by the smoke of its projectiles.*

To induce and maintain the demoralisation of the enemy it is essential that the artillery should not cease fire, and that a slow rate of fire should always threaten the hostile skirmishers. At rare intervals, sudden and violent bursts of fire will produce the most terrible effect and will enable the infantry to make effectual progress.

§ 7. THE LAST PHASE

Finally, the first line of infantry has reached the zone from which it can see the defender sufficiently clearly to reply effectively to his fire. Usually, when it enters this zone, the fire of the defence becomes so violent that it is literally unbearable, and it is necessary to lie down and take cover to reply to it until the enemy, either on account of the effect of our fire or through mere lassitude, ceases to shoot so effectively. One can then make a rush forward, then the same causes reproduce the same effects.

Usually the defender's fire compels a long halt in the zone of effective fire. It is during this pause that the assailant will be able to inflict material loss on the enemy and shake his morale—in a word begin the preparation of the assault.

It goes without saying that if the fire of the defence is never sufficiently effective to make the assailant stop, the latter will continue his advance. If it is true that attack by fire is an indispensable factor in success, on the other hand the fact that the defender is unable to produce an effective fire gives one so poor an idea of the means at his disposal, his numbers, and his energy, that one can proceed to close with him as quickly as possible. Deliberately to take up *a main fire position* would be purposeless.

The behaviour of the defender will determine the distance at which the assailant will believe himself able to cease fire and to charge with the bayonet. One has seen this distance come down as low as 20 or 30 metres; it is more usually 50 metres; it can rise to as much as 200 or 300 metres. Charges from a distance of 300 metres have sometimes succeeded, just as assaults from 20 or 30 metres have sometimes failed.

What happens, what ought to happen, between the time when the skirmishing lines, still very attenuated, enter the zone of effective fire and the time for the assault?

The groups continue their advance by rushes led by their group commanders. These leaders retain the same independence; but they have to struggle against growing emotions and increasing difficulties.

"All the attacking troops," say the German Infantry Regulations (327 and 336), "must have the resolute determination to push on continually and pass their neighbours.

"It is the duty of every body of troops to profit by every opportunity to gain ground.

"It will happen that certain units which have been favoured by the ground advance faster than others; it would be wrong to stop them."

General de Négrier said the same when he wrote: "Every swarm of skirmishers must try to penetrate the enemy's line by all possible means, without regulating its movements by those of its neighbours, and above all without waiting for them. One must in fact remember that under a fairly brisk rifle fire, if the swarms wait to go on until their neighbours have facilitated their advance, and these neighbours reason in the same way, the whole line of battle stands still."

The success of a Japanese attack has often been decided by the initiative of some one officer who, ever on the alert, has thought he perceived in the enemy some indication of weakening or some tendency to weaken, and has at once dashed in with his men.[1]

It is from the first line, when it is in close contact with the enemy, that the signal for the assault starts. It alone can gauge the situation and the enemy's morale, and feel that the time has come.

The Regulations have at last given official sanction to this truth:

"When the first line has the feeling that the time for decisive action has come it must not hesitate to charge. It warns the fractions in

[1] "British Officers' Reports," vol. ii. p. 519.

rear by signal. These collect together and rush forward." (German Regulations, 338.)

Moreover, a commander, of whatever rank, who attempted to give the signal for the attack from the rear, would cover himself with shame and ridicule.

Between the time when the attenuated lines penetrate into the zone of effective fire and the time when the assaulting troops burst out of it a transformation has been produced. One does not charge with a widely extended skirmishing line, but with a thick line. The successive lines have come forward and become amalgamated with the first line during the period of effective fire. This has not made its fire more deadly, for it has lost in quality what it has gained in intensity; this accumulation of men in the first line does not give fire superiority, but a regular storm of fire bursts on the hostile position: the whistling of bullets, however badly aimed they may be, reacts vividly on the morale of the defenders, already shaken by long hours of fight, and, moreover, suffering appreciable material losses.

Undoubtedly both sides will remain long in this condition; fear goes on increasing in the one as in the other, but the attacker has on his side the feeling of having already overcome so many dangers that success now seems to him probable.

He draws near slowly by rushes more or less short, followed by interminable pauses. The more he advances, the more deafening does the fire become. The successive lines amalgamate in a

thick firing line, which shoots all the time, firing to calm itself and to make a noise.

Sooner or later the attempt is made to storm. It may succeed; it may fail. More often when the time for the assault is imminent distant events have had their effect on the defender, have shaken him, and have determined him to retreat.

The attacker, who, with watchful eye and alert mind, never ceases to keep him under observation, spies the symptoms of discouragement, the undulation and thinning of the hostile lines, the slackening and growing wildness of the fire. Suddenly some subaltern springs forward carrying his handful with him, followed by neighbouring groups and by the lines which have remained in rear; the bugles sound the charge. Perhaps the enemy will slip away before he is closed with; perhaps he will be beaten then and there; perhaps his fire will stop the attacker. More often it will require reiterated attempts to give victory in the end.

It will be seen that the most critical phase for the attacking infantry is the last one; it is to get over the last 300 or 200 metres that artillery support is necessary to it. But it is just then that the old regulations withdraw the co-operation of guns from the sister arm. In future we shall act quite otherwise, and percussion fire on the line of the enemy's infantry will be continued without interruption up to the actual moment of storming. It will reach the defender, deafen him, shake him, and above all plunge him in a cloud of smoke in which he will no longer be

able to use his weapons. It will be the best protection for the assault.

§ 8. ATTACK AND DEFENCE—THE ENCOUNTER FIGHT

From the line of conduct pursued by the assailant we shall deduce easily that which the defender should adopt. At long range his fire is effective, while that of the assailant is not so. He too will have formed a firing line of very slight density, and his men, shooting collectedly and aiming carefully, will succeed in inflicting serious losses upon their already visible enemy. The artillery of the defence can act, but the effects of its distant fire will be very slight on lines of widely extended skirmishers lying down.

When these get to good useful rifle range the defence has but little interest in increasing the density of its first line, since it has its reserves at call and is seeking only for fire effect. It is only in the last phase, when the rifles of both sides are completely out of all control and fire "into the blue," that more men must be put into line to produce by intensity of fire the effect which can no longer be obtained by its accuracy.

The guns of the defence will act effectively at that decisive moment when the assailant begins to thicken his first line with a view to pushing the attack home. Guns hitherto silent can suddenly unmask, and their fire with high explosive shell will inflict serious losses on the thick line of the attacker up to the time when the artillery of the attack is able to locate them and

to take on these last supports of the defence. This interval may suffice to break the dash of the assailant.

As regards infantry it is to the interest of both sides not to put into the first line, up to and including the moment of closing with one another, more men than are absolutely necessary, say $1\frac{1}{2}$ to 2 men per metre. Denser lines have neither more available material force nor greater moral effect. Skirmishers shoot without fear and with some satisfaction at troops in thick formations. The defender will, on the contrary, be impressed by the sight of successive lines following one another right up to the limit of the horizon. The first one repulsed, another surges up and takes up the fight again, then another and another, and still they come on! There are too many of them.

The attacker, for his part, has felt his confidence grow as he gets on, as he overcomes dangers, as he finds himself nearer to his goal; but his nervous tension is such that all his energy may collapse and fail him after a last effort. Japanese troops were sometimes seen to fall exhausted on the edge of the Russian trenches to which their heroism had carried them. If the assailant, having reached the hostile line with the conviction that all is over, that at last he is victorious, suddenly sees fresh troops spring from the ground who counter-attack him vigorously, he will be in no condition to stand up against this disillusionment at the very moment when he has relaxed his overstrained nerves.

"All the attacks without depth which we

note in recent wars have failed," says Comte de Grandmaison; and what is true of the attack is no less so of the defence. In the infantry combat as in the cavalry combat, victory is to him who throws in the last fresh troops.

Such is pretty well the physiognomy of the modern fight. Normally one engages *in first line* $1\frac{1}{2}$ to 2 men per running metre of front: the assailant sometimes uses 6, 8, 10 men per metre, *including reserves*, to reiterate his attacks, for he must never let go.

The losses suffered are extremely variable according to the energy displayed; sometimes they fall to 5 or 6 per cent.; they also rise to 40 or 50 per cent., and may even rise far beyond these figures, as was the case at certain points at Froeschwiller, at Mars-la-Tour, and at Saint-Privat.

The artillery may expend as much as 400 rounds per gun, but this is a high maximum; the infantry fires from 200 to 300 rounds per man when the attack is conducted with all the energy necessary for success and when it encounters a resistance no less vigorous.

One can state no average time for the duration of the fight; this depends on the fighting worth of the combatants, and the support which one side and the other finds in the ground, etc. The assailant gets to 600 or 700 metres of the defender fairly quickly; it takes him several hours, at least two or three hours, to advance as far as 200 or 300 metres. Having got there, he may sometimes assault without waiting any longer; at other times

he will find himself stuck fast for an indefinite period.

All the advantages which we have attributed to the defence only exist if the defender has entrenched himself seriously. If he has not established his firing line in deep fire trenches, and sheltered his supports in cover trenches joined to the former by communicating trenches, he cannot maintain in the last phase of the fight the superiority he had at the outset. If he has placed himself on a crest-line, it is he who offers targets more visible than does his adversary.

Napoleon states authoritatively that the defence is admissible only in a very good and strongly fortified position. But then it is almost impossible to debouch from it.

The offensive imposes itself on him who would conquer.

If both adversaries are imbued with this truth, they arrive, naturally, at the encounter fight.

In it the task of the commander is more arduous; dispositions have to be taken more hastily and in almost complete ignorance of the situation in which the enemy finds himself. Neither the one nor the other of the two adversaries has the advantages which an entrenched position affords; the encounter usually takes place on ground which has not been selected because it offers a very clear field of fire; cover is consequently more plentiful; skirmishers and even small columns progress more easily. The two sides find themselves within effective rifle range pretty quickly, and the infantry fight reduces itself almost to its last phase.

The artillery, having to come out of the columns to deploy and having to avoid coming into action in fractions, will perhaps not support the infantry from the first moment; this will still further facilitate the advance of the skirmishers on one side and the other.

The combat at a given point of the battlefield will turn more or less quickly to the advantage of one of the adversaries. The other will be hustled from the outset, or else he will know how to organise, behind his front line, a position in which he will maintain the struggle; the fight will then assume the same character as in the attack and the defence of an entrenched position.

CONCLUSION

Although the normal formations, regulated for to an extreme degree, which were in vogue from 1875 to 1900 have disappeared from all the Training Manuals, one might still believe that the secret of success lies in the form of dispositions adopted. We think it our duty to react once more against this temptation by recalling to mind certain essential features which, in spite of their importance, may have remained unperceived.

Of course there are good dispositions and bad dispositions, there is a science of the fight, there are methods to avoid and methods to be recommended. The science called *tactics* has indeed its justification; but it is vain if courage, keenness, and the will to conquer do not inspire the combatants.

It is above all among the officers and the junior non-commissioned officers that such qualities are indispensable. Formerly it only required one or two energetic men to carry forward a battalion. To-day it is necessary to have along the whole line of battle leaders full of keenness, of untiring keenness, who ceaselessly carry forward every

part of those long, cumbrous, heavy lines, which are so adherent to the ground.

Let us call to mind the attacks of 1859, and those of the Prussians at Woerth and Vionville; it is the lieutenant who leads on his section with him; it is the lieutenant again who leads on the Japanese group to the assault of the Russian lines.

One must not reckon therefore that certain given tactical methods, the bringing up of supports and reinforcements from the rear at the desired time, will mechanically give one victory. Of course, good dispositions are necessary, but troops are not led forward to the charge, are not led on to victory, except by men of stout heart who *head the movement*, inspiring the remainder by example and by a strange force which emanates from them and overawes both friends and foes.

No more to-morrow than of old shall we win without courage; we shall win always thanks to courage; and if it is not the only mainspring of victory, it remains ever the most essential thing, that which we can never do without.

PART II

THE BATTLE

CHAPTER I

BEFORE NAPOLEON

§ 1. THE BATTLE IN OLD TIMES

Up to now we have studied what may be called the elementary combat, a slice of the fight or battle, the struggle between two bodies of troops which are framed to right and left by other troops, and are opposed to one another front to front. In it we have seen in broad outline the manner of fighting which armament has imposed in different epochs.

A battle or a fight can be resolved almost completely into elementary combats such as we have just seen described ; these latter usually compose the major part of it ; at various points of the front are found battalions, regiments, brigades, engaged with other units which are facing them. But that is by no manner of means the whole battle or the whole fight. Without mentioning the cavalry actions of which the effect, sometimes transitory, may become most important, it is not possible to *resolve* the entire struggle between two armies into elementary combats fought out on a rectilinear front. At various points on the battlefield there are salients and *points d'appui* whose dimensions

do not equal, or hardly exceed, the depth in which a body of troops is echeloned for fighting. Commanders of every rank endeavour ceaselessly to manœuvre, and sometimes they succeed : they try to combine a flank attack with a frontal attack in order to envelop a salient on which they obtain the enormous advantage of concentric fire. The Commander-in-Chief seeks to outflank or to turn a wing to find the undefended, or but weakly defended, space by which he may reach or threaten closely the enemy's line of retreat. And there are partial attacks which meet with but little opposition and are conducted accordingly.

That is a characteristic common to the battles of every epoch. We have noted it in the battle of antiquity : the frontal fight leads to no solution ; it is an attack in flank or in reverse, sometimes carried out by a numerically insignificant body of troops, which procures victory.

At Marathon the two hostile fronts are in turn threatened with being broken, and they re-form without difficulty, but behind the wings of his phalanx Miltiades has two available bodies which he pushes into action when he judges that the Persians are exhausted by the fight ; he outflanks them, threatens to envelop them, and wins with an inferior force deployed on a wider front.

Such is battle fought by infantry alone. Alexander, with his numerous cavalry, operates more widely ; he brings it against his adversary's flanks while the infantry attacks the front. Hannibal crushes the Roman armies by closing his two wings of cavalry in on their flanks.

We know, too, what are the operations at Pharsalia—how Pompey wished to take Cæsar's army in reverse, and how the latter, anticipating and getting wind of this manœuvre, brings suddenly into action a reserve which overthrows Pompey's marching wing, and in its own turn acts against the flank of the Pompeans.

We have seen how, in the Middle Ages, victory is obtained sometimes by charging a flank and sometimes by counter-attacking after a clumsy frontal attack of the enemy.

In the days of Gustavus Adolphus, of Condé, and of Turenne, the drawing up of the battle array is the same as in the Middle Ages: it is the cavalry on the wings which decides victory, and in the cavalry combat it is by an outflanking movement that success is decided: at Rocroi and at Lens, Condé concerns himself above all with keeping the last squadrons available in order to throw them on to the enemy's flank and turn the mêlée into a pursuit.

Up to then infantry could hardly manœuvre on the wings. It could not do so without breaking its lines to detach to one side the body of troops charged with making the flank attack. It would also have been necessary that the units used in these turning movements should be able to manœuvre, to divide, and to change direction rapidly. But one could not leave gaps without running a risk of the enemy throwing himself into them and taking in flank both segments; and the ponderousness of the formations in vogue did not admit of their manœuvring.

It is the cavalry alone, thanks to its speed, which can manœuvre on the flanks. It can operate in several separate groups, capable of manœuvring, and runs no risk of the hostile infantry penetrating into its intervals, and turning them into breaches during the few moments necessary for charging.

Towards the end of the seventeenth century infantry fire begins to become sufficiently rapid to admit of sweeping effectively the intervals left in a front. At Fleurus the French infantry carries out a big wheel to follow the manœuvre of the cavalry, but it is still the latter arm which delivers the decisive attack.

Artillery, which had been very numerous at the beginning of the sixteenth century, could not be kept up during the century of poverty which corresponds with the Wars of Religion. At the end of the seventeenth century it is barely reconstituted and its small number does not admit of breaking hostile lines, as at Pavia or Marignan. For a long time yet there can be no question of piercing an army at its centre.

If Tallard and Marsin are beaten at Blenheim by an attack on the centre it is because they have not united their armies, and because they allow the enemy to throw himself between them.

§ 2. THE EIGHTEENTH-CENTURY BATTLE

Towards the middle of the eighteenth century all the potentiality of arms is taken advantage of. It is realised that it is safe to leave gaps and

irregularities in the front, especially if it is covered with skirmishers.

During the Seven Years' War armies adopt less uniform dispositions, either by battalions being echeloned as in the oblique order, or by grouping them at certain vital points while neglecting the others. There is no hesitation about fighting in the most broken ground.

There are still plenty of generals like Contades at Minden, who spend whole nights in drawing up their troops in line; but others, like the Dukes of Broglie and Brunswick, commit them to action as they debouch in the presence of the enemy.

Frederick II., profiting by the exceptional training of his troops, makes his infantry manœuvre even on battlefields. Though cavalry does not cease to be for him the arm of the great decisive movements, he subdivides his infantry and produces convergent attacks by which the infantry determines the issue.

Thanks to precision and quickness in movement the Prussian army can move across the battlefield, so as to be brought against one wing of the enemy, and can deploy suddenly without giving the latter time to change his dispositions. Leuthen is the perfect example, *almost typical*, of the Frederician manner; that day the great king succeeded in realising his ideal. The Austrian army, less well drilled than the Prussian, has deployed beforehand. Frederick marches straight on it, but only deploys his advanced guard; the bulk of the army turns to the right without giving itself

away, and, moving as if in procession, goes and places itself at right angles to the enemy's left. With the precision of drill of the Prussian infantry one single word of command is enough to form it in line to the left, correctly dressed. Frederick at once proceeds to attack; the battalions move forward in succession from the right, and thus find themselves in echelon *in oblique order*.

As soon as the danger is seen the Austrians try to face to the left, but they are unable to form in an orderly manner for lack of skill in manœuvre. They pile themselves up in disorder on too small a space; Frederick, in front of Leuthen, attacks what had been their left flank and has now become their front. He converges on it the fire of his infantry, some battalions of which still further overlap the enemy to the right; the whole of the artillery is there, enfilading the enemy; his grenadiers are in support; his cavalry comes in on the rear of the enemy. It is again the cavalry which says the last word, although almost the whole task has been put through by the fire of infantry and artillery.

If at Leuthen Frederick operates with his forces closely united, he does not hesitate to break their order when, as at Prague and other places, the nature of the ground suggests such a course. At Torgau (November 3, 1760) he ventures on the most daring separation of all, the bulk of the army taking the enemy completely in reverse while Ziethen attacks their front with a detachment.

It is duly demonstrated, then, towards the

middle of the eighteenth century, that armies can fight, not as heretofore, in one single mass, or in one indivisible, even, regular line, but in several distinct bodies. These army corps or divisions usually only leave between them such intervals as the range of firearms will prevent the enemy from throwing himself into; but the example of Torgau shows that sometimes the advantage which may be drawn from wide turning movements outweigh, in the eyes of the general, the dangers of a too complete separation.

This wideness of turning movements is one of the most important consequences entailed by the progress made in weapons. Sufficiently powerful to admit sometimes of breaking the enemy's lines by fire, above all they enhance the effect of flank attacks, and admit of their being made by detachments.

"In an attack, that which procures the greatest and most decisive advantage," says Guibert, "is assuredly to turn, outflank, and hug the enemy. There is no well-designed and successful attack but such as outflanks that of the enemy, and consequently is produced on a wider front than his."

Fire-effect, which makes turning movements so effective, also admits of their being given a greater scope.

"Our weapons," says Mauvillon,[1] "to a remarkable extent help undertakings against an army whose flank is not secure. Corps which are sent round can go wide, and separate even to the

[1] "Essai sur l'influence de la poudre à canon," 1783.

extreme range of the musket without fearing anything, because the cross-fire of artillery and musketry covers the gap to such an extent that the enemy dare not try to push into it."

Le Roy de Bosroger advises turning movements with a wide scope, because of the moral effect they have on the enemy. "It sometimes happens," he says, "that one deliberately detaches a corps whose task depends on the main manœuvres, perhaps to turn the enemy and take him in rear, perhaps to fall on him from some other point, in the middle of the engagement, and, by surprising him, force him to change all his dispositions." [1]

And Guibert admits also that "the army should be so disposed that if one wishes, one may direct a part against the enemy's flank while one directs the remainder against his front."

What Guibert, Mauvillon, and Bosroger advocate is briefly what Frederick, by prodigies of skill, succeeded in doing with an antiquated instrument, and which later on was to be carried out more rapidly and more easily with new methods of procedure.

Henceforth French tactics place at the command of generals the means of manœuvring on battle-fields.

Maréchal de Broglie distributes his army into *permanent* divisions (1759). Until the moment to commit them to action has come, he keeps them massed in close columns, easy to move. He directs them by the shortest roads to the

[1] Le Roy de Bosroger, "Élements de la Guerre," 1773.

points where he wishes them to fight, he deploys them quickly by the new methods which Comte de Guibert has invented. At Bergen (1759) we see an army disposed, not as formerly in two or three lines, but in groups: skirmishers in the woods and orchards, battalions deployed, reserves in mass, ready to guard against the unforeseen.

"Formerly," says Guibert, "the movements which formed an army in column or in line of battle were so slow and so complicated that it took whole hours to make a combined movement; one had to form one's battle array very far from the enemy. Now, or rather from now on, the movements which form troops in column or in line of battle being simple, expeditious, and applicable to all kinds of ground, one will form one's battle array as late and as near the enemy as possible, because columns are much easier to move about than are lines."

§ 3. THE BATTLES OF THE REVOLUTION

The following generation establishes as a custom that which was still the exception in the Seven Years' War. The divisional principle is definitely admitted in France from the time of Maréchal de Broglie. Having become a national custom, it will bear its fruit in the wars of the Revolution.

Dumouriez, who is essentially an adherent of the old school, does not dare to attempt great turning movements, but his army manœuvres according to the principles of Maréchal de Broglie; at Neerwinden he leads it forward in eight

columns, grouped into three corps. Although he only had 44,000 men, he covers a front double that which Luxembourg held in 1693. His divisions deploy to the front and fight separately, without bothering about any kind of dressing or parade-ground touch. The Commander-in-Chief ensures concerted action by the direction given to the fight of each division, but does not form any continuous line. Without being piecemeal the action is formed of several minor fights.

At Wattignies, Jourdan's 56,000 men attack on a front of 20 kilometres. The Austrians, who apply the same methods, are no less extended, and use in the battle a column brought in from a most distant point (Consolre), which takes our right in reverse and almost snatches the victory from us, at the very moment when Jourdan and Carnot have just taken Wattignies.

These divisional movements, this scattering of columns over large areas, are not peculiar to the Army of the North. Brought up in the same school, the French and Austrian generals who operate in Alsace and on the Sarre follow the same principles. The Prussians alone, without absolutely conforming to the methods of Frederick, preserve more cohesion and keep their armies better assembled.

In 1796, at Neresheim, all the faults which the divisional system may cause and all the mistakes to which it may lead are exaggerated by Moreau's clumsiness. Having only 35,000 men in hand, when his army numbered 65,000, he still found occasion to detach Duchesne's division to a distance

of 10 kilometres to his right, without any idea of common action, without intercommunication. There remain to him 28,000 men on the battlefield, and knowing neither how to dispose them to receive attack, nor how to handle them during the action, he nearly got himself crushed by 24,000 men. His divisional generals succeeded in winning by sheer skill in the details of the fight.

This battle, however badly conducted, shows us that at the time when Bonaparte appears on the world's stage, the two leading armies of Europe put their divisions into action separately on a front of 35 kilometres, the flank divisions at 8 or 10 kilometres from the main body, each division fighting on its own account, without any general control of the whole. The generals who have received some military education before the Revolution know how to allocate their forces, and how to use the bulk of them against the point selected for the attack. The others, Hoche, Jourdan, Moreau especially, and most of the Austrian generals are incapable of making any combination.

We have only looked so far at the "battles" properly called "pitched battles." To realise the error to which the divisional system at first gave rise, one must take into consideration also those groups of fights fought by pretty well independent divisions scattered over whole provinces, such as the affairs which took place in Alsace during the campaign in 1793 along each of the tributaries of the Rhine, the Lauter, and the Moder; the battles of the Ourthe and the Roer in 1794, where

the army of the Sambre-et-Meuse scatters itself over 60 kilometres; such in fact are the actions fought by Moreau in 1796, on the Kinzig and the Rench, from Rastadt to Ettlingen after the passage of the Rhine.

Nothing could well be more opposed to the practice of the preceding generation, to the armies kept ever assembled and always fighting as one single whole; these innumerable actions, to which sometimes the name of "battles" is wrongly given, exemplify well the excesses of the divisional system, in the first flush of reaction against the linear system, and in the hands of unskilled generals.

CHAPTER II

NAPOLEON

§ 1. THE NAPOLEONIC BATTLE

(*a*) *The Flank Attack*

April the 12th, 1796, marks an epoch in the history of war. On that day General Bonaparte, who had been recently nominated to command the army of Italy, gained his first victory.

It was a simple fight, which took place between Montenotte and Montelegino. Bonaparte attaches so little importance to it that he does not direct it in person.

And yet the fight of Montenotte holds a capital position in military history. It presents for the first time, though on a small scale, the characteristic traits of the great Napoleonic battles. The general takes advantage of the pliability afforded by the divisional system to manœuvre extensively and to prepare a surprise; but he takes care not to let the divisions act on their own initiative or to employ them on too distant points. At the beginning of their movement they have enough room to make evolutions easily, but they are directed by a single will, and this will causes them to converge on a

single point. Argenteau's Austrian corps had attacked the fortifications of Montelegino on the preceding evening. At break of day Rampon and Laharpe sallied out and attacked him frontally with 9,000 men. Masséna, who was with Laharpe at Savona, was not moved in a straight line to the locality of the fight, but 8 kilometres to the left on the crest of Altare. He had arrived there in the dark and saw the first shots of Laharpe's division fired at sunrise and rushed in. He fell on the rear of the Austrians and went ahead of them to Montenotte. Argenteau, confused by so many attacks, tried to form face to them all, and to manœuvre under fire; his battalions, attacked on all sides, whirled round and ran away.

We here find, as we have said, the characteristic traits of the finest Napoleonic battles. And this is so, firstly because of the contrast it shows to the errors of the period immediately preceding, and the employment of the troops in a single action on a front of limited extent. This concentration was not only imposed on the troops engaged at Montenotte. Contrary to the practice of the Sambre-et-Meuse and to those many actions on the Ourthe and the Roer, we here see a whole army assembled a short distance away from the ground where two divisions are engaged, but where the enemy might suddenly unmask much greater strength. "The art of war is composed of invariable principles which have for their chief aim to guarantee the army against the mistakes made by commanders as to the strength of the

enemy." These principles, which for some years had been lost to sight, were re-established by Bonaparte, and the first among them is the principle of the concentration of forces.

But everything in war is antinomic, and the mission of art is to combine in just measure the opposed elements; for instance we find alongside this principle of the concentration of forces, the principle of their distribution. Bonaparte makes all his troops fight in a limited area, causes their action to converge on a single end, but he allocates to each division a separate movement. The manœuvre is the result of the combination of these elementary movements. Laharpe and Rampon attack from Montelegino towards Montenotte; Masséna from Altare on Montenotte.

This distribution, and this combined action, permitted Bonaparte to obey a conviction that was very firmly rooted in his mind:

"It is by turning the enemy, by attacking his flank, that battles are won."

Every time that Napoleon was able to turn or outflank the enemy he did not fail to do so. In order to know what he felt about it, and his way of doing it, we should not only examine the battles in which he succeeded in carrying out a turning movement[1] of great extent, but every occasion in which he tried to do it, whether the battle took place or no, whether or no the enemy

[1] A turning movement, by means of which a *detached* corps goes to attack the enemy in flank, is to be distinguished from an outflanking movement, by means of which the extremity of the line of battle wheels round on to the enemy's flank without separating from the central army.

avoided the encounter or shifted the theatre of operations. Four months after Montenotte we see Sérurier's division, at first kept 35 kilometres to the right of the army, engage in the battle of Castiglione on the enemy's flank.

Napoleon tries several times to bring off this manœuvre again: in 1805, thinking to attack Mack to the south of Ulm, he keeps Soult's corps 30 kilometres to the left in order to take the enemy in flank; later, when marching on Vienna, and thinking that Koutouzoff would offer resistance at St. Pölten, he detaches Davout and sends him by fearful mountain roads 50 kilometres to the right, so as to make certain of taking the Russians in rear: but these refuse to accept battle, and Napoleon is only able to overtake them at Hollabrün, where he tries to close on them the pincers formed by the corps coming from Krems and from Vienna.

When the Allies debouched from Austerlitz, Napoleon intended to receive the blow to the east of Brünn, and to hurl Davout's corps, which was arriving from Vienna, upon their flank. The extreme weakness of this corps, which had been reduced to 3,600 men by a forced march of 110 kilometres, prevented him from carrying out this intention.

The following year at Jena he sends Davout 30 kilometres to the north in order that he should come down on the flank of the enemy he is about to attack at Weimar.

In the winter campaign of 1807 he tries the same manœuvre at Bergfried, and succeeds with

it at Eylau. He renews it in 1809 at Eckmühl, in 1813 at Bautzen.

When, in the month of August 1813, Schwarzenberg debouched from Bohemia on Dresden, Napoleon first thinks of letting him throw himself against the fortifications covering this town, and of debouching behind his right wing by Pirna. He gives it up because he does not consider the young troops of Gouvion Saint-Cyr capable of holding Dresden against superior strength.

To sum up, when one studies Napoleon's projects on the eve of a possible battle, one sees him almost always seeking some vast turning movement, an attack levelled full at the enemy's flank by corps called up from 10, 20, 25 kilometres' distance. This manœuvre does not always come off; sometimes the enemy steals away, as at St. Poelten; sometimes he heads off the detached corps, as at Jena-Auerstaedt. Napoleon was only able about three times out of four to accomplish his vast turning movement successfully; but it is none the less true that he nearly always attempts it.

(*b*) *Object of the Flank Attack*

When he does not succeed in delivering his attack full on the enemy's flank, Napoleon contents himself with an outflanking movement. This is the case at Austerlitz and Jena. He also has recourse to the outflanking movement at Wagram, and at Dresden, where space is lacking for a more ample manœuvre; on the Moskowa, and at

Wachau (the first day of Leipzig), where he did not dare risk a combined attack.

The stronger morally and physically the enemy is the more does the turning movement of great extent by detached corps offer danger. We have seen it when in his march on Bautzen Ney's corps was attacked by the Allies and narrowly escaped a very grave reverse. In his instructions to Davout of November 5, 1805, in view of the hoped-for battle at St. Pölten, Napoleon clearly defined the distinction that he makes between an attack on the flank and a simple outflanking attack. "Little outflanking is to be done" if all the Russian armies have united; but on the contrary "they are to be attacked in rear" if Koutouzoff has received no reinforcements.

On the whole whether he employs a turning movement or an outflanking movement Napoleon uses them to obtain the same results. It is true that at Austerlitz and at Dresden the outflanking movements only co-operate with the frontal attack in pushing the enemy back, that at Eckmühl the two chief masses of the French army crushed the army of the Archduke as in a vice; but as a rule the Napoleonic battle is more complicated, more intelligently organised; the attack on the enemy's flank has for its object not to produce an immediate decision, but to provoke it.[1] It should only be thrown forward when the enemy has been led to expend his strength and to engage his

[1] This point has been brought to light and enlarged upon by Colonel Camon: "La Bataille napoléonienne," 1899, and "La Guerre napoléonienne: les batailles," 1909.

reserves along the front. It then obliges him to break his order of battle so as to oppose the troops of the outflanking attack; that is the beginning of disorganisation, and to it must be added the moral disturbance caused by the noise of guns behind the front. Generals and soldiers alike are moved by that.

Then the frontal attack should be made; it takes advantage of this disorganisation, of this disturbance, to hunt the enemy from his positions, and if possible to pass on straightway to his pursuit.

Napoleon expressed himself so frequently and so clearly on this point that doubt is no longer permissible upon it. From Castiglione to Bautzen we have, as far as each battle goes, the authoritative text. At Castiglione Napoleon at first gives way before the enemy; but suddenly a cannon shot is heard behind Wurmser's left. The Austrians begin to get agitated. Bonaparte rushes towards Joubert: "Do you see Sérurier attacking directly he has arrived? You ought to be engaged already; go with your chasseurs and force the enemy's centre."

In this first experiment, however, the attack was delivered too soon. Napoleon afterwards, with his riper experience, seized with greater precision the decisive moment in which the enemy was becoming disorganised. The logical succession of events is brought clearly to light by the souvenirs of Marbot on the battle of Wagram, by the bulletins of the Grand Army for Lützen, Bautzen, and Leipzig: one sees from afar the

dust of the columns, the smoke of the batteries that attack the flanks of the enemy, one sees his reserves hurrying up and deploying. The Emperor, who patiently observed all the phases of the struggle, "judges that the moment to decide the battle is clearly indicated." He sends orders to all his marshals to attack, he pushes Drouet forward on to the decisive point with a large battery of 80, 100, 150 guns, Oudinot or Mortier with the Young Guard.

The unity of procedure is shown in the four great battles of which we speak, as well as in that of Castiglione, which Joubert so clearly describes.

Here, it seems, is Napoleon's ideal manœuvre:

1. By the frontal combat to oblige the enemy to engage all his troops.
2. Then to deliver an attack on his flank, and when his order of battle has been disorganised in order to meet it—
3. To attack thoroughly with all forces available, and, above all, with a mass of artillery.

In practice this is an ideal which Napoleon always pursued and hardly ever attained. At Castiglione he attacks as soon as he hears Sérurier's guns, and this without having forced Wurmser to engage all his reserves. Wurmser is able to form front on both sides and the victory is not overwhelming.

At Eylau the Russians take the initiative. Our

forces are used up sooner than theirs because of the disaster that overtook Augereau's corps. They hold their own against Davout's outflanking attack, and it is only the appearance of Ney as night draws in that decides them not to resume the fight on the morrow.

At Lützen the outflanking movements are produced slowly and are but little accentuated; Eugène holds Lauriston back; the preparatory combat on the front is prolonged to the point of using up all the forces of Ney, Marmont, and the Guard.

At Bautzen the Prussians got wind of Ney's movement; it produced neither surprise nor disorganisation. The method begins to lose in value by dint of being used.

(*c*) *Particular Cases*

In the series of Napoleonic battles there are some cases of central attacks: Rivoli, Marengo, Friedland, Ligny. They come in time to remind us that there is no general rule in war, and that Napoleon, though he saw in turning movements the most natural way of obtaining victory, knew how to achieve it otherwise when circumstances prevented him from succeeding by his usual methods.

But however that may be, do not let us lose sight of the fact that in all these battles the enemy has been broken up by fire, and not by the shock action of columns in depth.

It happened several times and for very different motives that Napoleon fought a double battle,

that is to say, a battle composed of two clearly distinct actions.

At Austerlitz the Allies transported the bulk of their forces to the south in order to cut off the French from retreating upon Vienna, but three leagues from there they left Bagration, whose right rested on the mountains of Moravian Switzerland. Napoleon cannot outflank Bagration on the north at the same time as the whole of the rest of the Allied troops: there is nothing for him to do save make him the object of a separate fight by Lannes and Murat, while he outflanks and repels the mass of the Austro-Russian troops to the south.

The following year Davout, to whom it was assigned to turn the Prussian left behind Jena, encountered half the enemy's forces and gave them separate battle at Auerstaedt while the Emperor fought at Jena. In both cases the battle ends in a double victory, so that no difficulties arise out of it, no recall of troops from one side to the other. It is not the same thing at Leipzig and at Ligny.

On October 16, 1813, Napoleon, to the south of Leipzig, wins the partial victory of Wachau; in order to make it more decisive he wanted one or two more army corps at his disposal, but the instructions given to Ney and Marmont were such that these marshals had engaged all their forces with Blücher to the north of Leipzig. Napoleon obtained but weak reinforcements, which, moreover, arrived too late.

And again, on June 16, 1815, when he fought

Blücher at Ligny, he wanted to make his victory decisive by causing Drouet d'Erlon's corps to co-operate; but the latter is under the orders of Marshal Ney, who gives battle separately at Quatre Bras, and between order and counter-order Drouet ended by taking no part in either action.

These few examples prove how, a century ago, Napoleon himself met with insurmountable difficulties in trying to modify the distribution of forces between two armies fighting at the same time, back to back, at a very short distance from each other.

As we see, he manœuvred successfully from a central position between two adversaries when the space that separated them was large enough, but it was by no means the same when everything happened within a narrow compass, and amidst the emotions of a battlefield. A central mass can be played with in great operations, it must not be counted upon in battle. The advantages of the central position disappear, while those of enveloping formations become visibly enhanced. The progress in matters of communication accomplished during the last century has only enhanced these last, in causing the unfavourable factor in the enveloping attack to be eliminated, *i.e.* the difficulty of communication at great distances.

(*d*) *Initial Dispositions*

To sum up, Napoleon set before himself an ideal mode of attack. Circumstances rarely

allowed him to realise it altogether; but he always finds means of improvising a solution which corresponds to the circumstances.

The initial dispositions he takes are at the same time those which best suit his favourite method of procedure and those which lend themselves best to improvised manœuvres, to sudden changes of front, etc. These dispositions are, moreover, of a quite amazing simplicity: they consist of engaging as few troops as possible, letting them be used up completely without sending them any reinforcements, and holding the main body of troops well concentrated, "like a battalion in the hands of a good major" behind the wing where the decision is to be sought.

The army corps and the divisions are close together; each battalion forms a small compact column of 30 by 50 paces, and the battalions of each division are grouped in order according to the ground and situation. The great units thus massed are at the Emperor's disposition, and every moment he directs them as he wishes to such or such a point of the battlefield. Small columns move rapidly across fields, at such large intervals that their freedom of movement and their prompt deployment are assured.

See at Austerlitz the divisions of St. Hilaire and Vandamme advancing to the plateau of Pratzen: the brigades thread their way through the valleys, and the battalions separate and deploy when they get within firing range.

Let us above all remember the movements of Macdonald at Wagram. With his corps also

formed in a group of small columns he is sent by the Emperor to the right to support the outflanking movement of Davout. Suddenly the enemy rushes our centre; the Austrian cavalry comes up. The Emperor barely has time to order Macdonald to advance by the left flank with his whole army corps: the small columns turn without difficulty instantaneously in the new direction. Already the Austrian cavalry is appearing, ready to charge, but immediately the whole of Macdonald's army corps is transformed into a vast square; the battalions of the centre deploy in the wink of an eye, those of the wings close in to cover the flanks.

Such are the supple formations, the rapid evolutions, which the tactics of those days place at Napoleon's disposal, and the use he makes of them.

Before the battle the main body is tightly massed on the side on which it is proposed to take the offensive. The Emperor engages as few troops as possible, leaving the troops of the first line to use up all their bullets and all their energy. The promptitude of outflanking manœuvres admits of the frontal combat being sustained for sufficiently long with a small force.

It is the number of available and easily moved troops that gives the means of facing all circumstances squarely. Marching out of Jena, Napoleon soon ascertains that neither Davout nor Bernadotte can arrive in time; and he draws from the IVth corps the necessary troops to execute an outflanking movement, in default

of the turning movement which cannot take place.

At Lützen he has four army corps at his disposal at the moment the Allies attack, and these four corps are grouped in the manner most convenient for moving them, and making them advance upon the enemy. It is with these four corps that he will maintain the fight while awaiting the tardy arrival of Bertrand on his right and of Lauriston on his left.

It is useless to multiply examples. We shall prove in every case that Napoleon entered on battle with a premeditated plan, conceived almost always after the same pattern; that circumstances rarely permitted him to execute this plan in its entirety; that more often he had to modify it, even abandon it altogether and improvise another; finally, that the initial dispositions lent themselves to all modifications.

In proving that Napoleon always had a premeditated plan let us also observe that he hardly ever gave battle unexpectedly. Battles of encounter are exceedingly rare in his campaigns: one can only quote Marengo and Friedland. More usually the Emperor attacks a motionless enemy, or else he stops him in order to deliver battle at a well-chosen point. It is not that he likes fighting over reconnoitred ground; what he wants to know above all is where to concentrate and round which position to manœuvre, so that he can on the preceding evening detach and recall corps destined for the turning movement,

(*e*) *The Decision*

It has often been written that the Napoleonic battles were consummated and decided by attacks in mass, by furious assaults delivered by columns which were both large and deep. There is no other example of attack in mass formation than that of Waterloo. It is more than doubtful whether the Emperor had anything to say to it, and we know the result. In all the battles directed by Napoleon the army as a whole, no less than each individual battalion in particular, fights by firing and in thin lines. The essential difference between the battle of the preceding century and that of 1805 or 1806 is that the fighting line is thenceforward divided up and irregular; it is a series of thin lines separated by intervals, orientated in different directions and not a continuous line; but no deep formations are to be found in it.

Napoleon was strongly opposed to the employment of deep formations for fighting; it is by fire that he seeks victory, and not by the *arme blanche*. "As the principal weapon of modern men is a projectile, their usual formation should be a shallow one, for that alone enables them to bring all their projectiles into play. . . . Ancient weapons demanded deep formations, modern weapons shallow ones." The order for the battle of Jena says:

"The general order of battle shall be to form two lines, without counting that of the light infantry." When the moment comes to open the decisive attack, the troops advance along the whole

front; but, faithful to his principles of economy, Napoleon never engages any but those that can be deployed in the first line: "it is contrary to the usage of war to engage more troops than the ground allows one to deploy." The reserve provides what is needed to strengthen or complete the first line. No great masses in depth here, whose morale is used up without their muskets being brought into play.

All the artillery is brought into line; and at the most important point Napoleon forms an enormous battery. In this supreme moment all the cavalry is pushed forward, and if it is numerous, it already begins the pursuit. Naturally there was no question of this in 1813, because there was not enough cavalry; but at Austerlitz, at Jena, at Eckmühl, all the squadrons were hurled forward in a furious charge on the roads to Olmütz, Weimar, and Ratisbon. It is the intensity of the final charge, and not the amplitude of the turning movement, which increases the results of victory. The facts on this point are in absolute contradiction with the opinion so often expressed by Clausewitz, that great turning movements have for their object only to increase the trophies of victory. The inverse has always taken place; the object and effect of the turning movement is to *procure* success; it is the charge that exploits the results of the manœuvre and augments it. If we make turning movements as wide as we can make them, it is that they may meet with less resistance and lead more quickly behind one of the enemy's wings. We

know that they never result in a complete investment.

If he did not invent the pursuit, at any rate it is Napoleon who systematised it; who soldered it on to the battle, made it an essential factor—one might almost say, *the* essential factor of battle. And yet it was with the pursuit as with the ideal manœuvre which he was always trying to realise—he succeeded in it barely four times: at Rivoli (with infantry!), at Austerlitz, at Jena, at Eckmühl. These, together with Friedland, are the most decisive victories. The wider manœuvres of Eylau and Bautzen did not give such big results.

(*f*) *Offensive and Defensive*

We have already enumerated several times the battles that Napoleon fought; a good number of them took place on ground which the Emperor had occupied beforehand and where he had resolved to await the enemy; nevertheless, he always attacked. For battle he knew no other mode of action than the offensive, and this even for the weaker army if it was not obliged to defend a fortified position with bad troops incapable of standing steady in open country.

It may be objected that at Leipzig, at La Rothière, at Arcis, Napoleon fought defensively, but he was only reduced to a defensive attitude during the struggle; he had begun by attacking.

In Napoleon's career we do not even meet with what is to-day called a defensive-offensive battle. Some have wished to endow Austerlitz with this

character, but it is a mistake. As Napoleon himself says, Davout's corps, directly its numerical weakness was known, counted for nothing in the calculations of the Emperor. It remained "outside the system of the battle." If this corps succeeded *by the vigour of its repeated attacks* in fixing the enemy in Sokolnitz, Napoleon in no way counted on such a result, and had no need of it to carry out his plan. On the other hand, the line of the Goldbach, which to-day would be of real defensive value, was less valuable in a time when it was only possible to fire standing. Davout acts offensively only, allowing the enemy to crowd into the villages and returning to charge him time after time. Austerlitz is an exclusively offensive battle; besides, were not the French sent in to the attack at dawn?

The advantage of the offensive in battle is obvious: it disorganises the enemy, upsets his plans and combinations; the assailant, to some extent, imposes on him his initiative, his will. And yet of Napoleon's adversaries those who adopted the defensive suffered less grave reverses than those bold persons who opposed their offensive to his. The Moskowa and Waterloo are examples of this. As a matter of fact the law is not the same for all: it is above all necessary that a general should adopt a rôle proportionate to his capacity, a plan that he feels himself able to follow out methodically amidst dangers, surprises, friction, accidents of all sorts. There is no more difficult task for a general than to direct his troops in an

encounter battle; that is to say, a battle in which two offensives are opposed the one to the other. It is then that it is necessary to display most rare qualities of lucidity, decision, and imagination. It is quite natural that in the clash of wills and intelligences, generals of meaner value, like Wurmser and Koutouzoff, knocking up against Napoleon, become quickly confused and disabled, incapable of continuously restoring order and harmony to the movements of their troops. These very men, on the other hand, may find themselves more at home and more free in spirit among the relatively simple incidents of a defensive battle. He who is upset and flurried at Austerlitz because he is taken *en flagrant délit* holds his own with honour on the Borodino.

The defensive-offensive form succeeded, however, with Wellington in Spain against generals like Soult and Masséna. This enables us to conclude that no exclusive solution can be adopted, and that although we consider the offensive form combined with a wing attack as preferable, we cannot pronounce formally either against frontal attacks or against the defensive. The one essential is to appreciate correctly one's own value and that of one's adversary.

CHAPTER III

THE BATTLE IN MODERN WARS

§ 1. BATTLE IN THE NINETEENTH CENTURY

Napoleon and Frederick II., being men far above the average, had each conceived a method of battle which was very much their own, extremely complex, and suited to the tactics of their armies; each of these methods was an ideal which could only be more or less approximated to in actual execution. Such conceptions are the hall-mark of genius; one does not find them after 1815 —at any rate with the same stamp of power and originality.

The battle of Magenta, if considered by itself without the operations which prepared it, is still a splendid work in the Napoleonic style. The attack on the Austrian right flank, led so boldly by MacMahon, without anxiety and without hesitation, in spite of the absence of all connection with the main body, is worthy of Davout or of Masséna.

The antagonists facing one another at the outset of the American Civil War were of very mediocre value; never have improvised troops indulged in such routs and panics; they were

very unhandy, but in the Southern Army, at any rate, the commanders had received an excellent military education, and were men of the most energetic character.

"The corps of officers emanating from West Point is without doubt better taught than all the officers of Europe," said Rossel; and Major Scheibert confirms this opinion. Moreover, many of them had served an apprenticeship to war during the late campaigns against Mexico.

With such men at the head of the divisions and brigades—no matter what the subalterns were like—it was possible to carry out army operations. Lee and Jackson did not fail to do so.

As early as 1861, at Bull Run, and afterwards at Cold Harbour, Cedar Run, and Chancellorsville, the turning movements of the Southerners decided victory in their favour.

But after the death of Jackson and his abler assistants it became impossible to renew these manœuvres. The Southerners confine themselves to a frontal attack at Gettysburg, fail, and at last, exhausted, are reduced to the defensive.

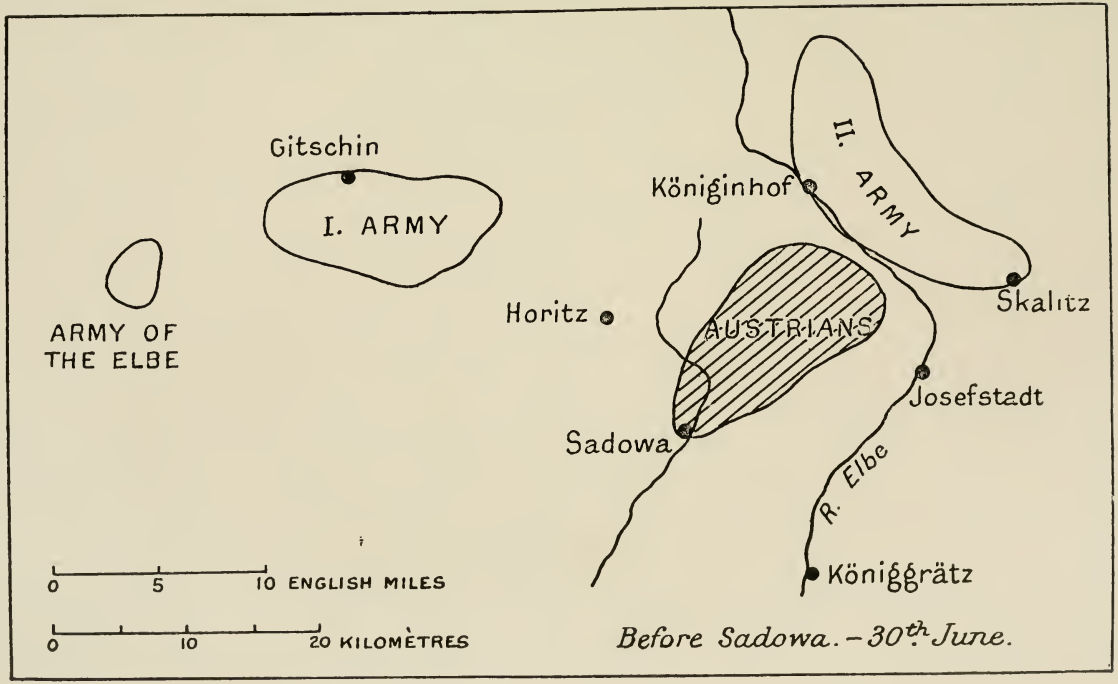
Grant knocks up against the strong positions they have prepared, and cannot bring off successfully any manœuvres against so skilful an opponent as Lee. Taking into account the numerical weakness of the Southern Army, he wears it down by indecisive battles, regular butcheries, and so ends the war by these primitive means.

Hardly has the War of Secession ended than we enter on the period of Moltke's victories. In them we no longer find those great turning move-

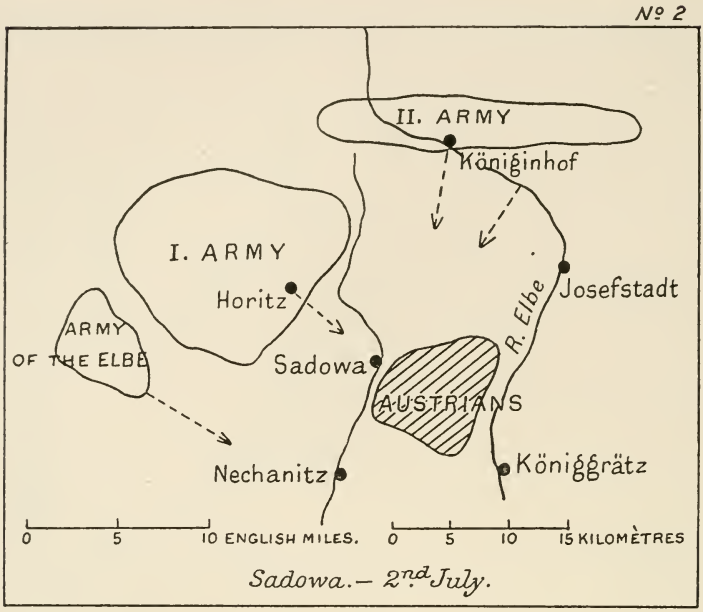
ments which characterise the Napoleonic style at Montenotte, Castiglione, Eylau, Eckmühl, and Bautzen; Moltke, bold as he was in the general management of operations, does not apply his boldness to extending his turning movements as did Napoleon. His forces are never divided in entering on the battlefield. If he has set himself examples from the great battles of the Napoleonic period, it is not Eckmühl, Castiglione, Bautzen he has chosen, but Wagram, Dresden, and the Moskowa. He clearly prefers the outflanking attack to turning movements of wide scope.

This predilection, which can be justified not only by success but a considered analysis of the conditions in which victory is obtained, explains itself primarily if we see in Moltke the disciple of Clausewitz. The latter despises the "geometric" element in war, and makes little of the direction of attacks. Unquestionably he recognises the usefulness of manœuvres, but for him they are but of small account beside the energy and activity with which the operations are conducted. He has not omitted to note that, among Napoleon's victories, the most decisive have been those in which the attack has been most vigorous and the pursuit most prompt and energetic. He considers, on the other hand, that the turning movement has for its object not to procure victory, but to augment its results. This opinion (contradicted by facts) leads him to prefer the less wide movements, by which he hopes to gain victory with greater certainty.

Moltke is strictly faithful to this doctrine.



Before Sadowa.—30th June.



In 1866 he takes great care to concentrate closely the troops of the three Prussian armies before the pitched battle. On June 30 they are still separated; the Crown Prince, coming from Silesia, is in contact with the Austrian army to the north-east, between Königinhof and Skalitz; Frederick Charles, having barely got farther than Gitschin, is 15 kilometres north-west of the hostile positions, and is separated from the Crown Prince by an empty space of 20 kilometres; the Army of the Elbe is still farther to the west.[1] Imagine Napoleon in such a situation; imagine again the victors of Leipzig in the place of the Prussians of 1866: there is no doubt that the general attack would take place next day,

[1] Sketch map. Before Sadowa, June 30.

the three armies converging towards Königgratz, the Crown Prince fighting the frontal battle, Frederick Charles taking the enemy in reverse and seizing the defile of Königgratz on his line of retreat. Moltke does not admit such a solution. On the one hand he brings the 2nd Army and on the other the Elbe Army into touch with the 1st Army, and on the evening of July 1 all three together on a front of 30 kilometres for 300,000 men.[1] This is the density of a decisive attack in mass. Then, but only then, Moltke concerns himself with outflanking the enemy. To gain the space necessary for deployment it is absolutely necessary to push out one wing or the other. Moltke, it seems, wishes to push out the two corps on the right to throw them against the Austrian left flank, but his hand is forced by Prince Frederick Charles, and it is the left which carries out the outflanking movement.

Moltke, at any rate, imposes his will during the battle. He prevents Frederick Charles committing all his forces in the frontal attack, where he considers it impossible to obtain success directly, and where the battalions would be piled up on one another and expended without profit.

The victory is decisive and crushing, but it is due to the men and the officer corps, trained morally and professionally for a number of years by the care of William, prince and king; it is due to the energy and vigour of the attacks, to the effectiveness of the fire, to the needle-gun, and to the good tactics of the Prussians. In it the action of the

[1] Sketch map. Sadowa, July 2.

supreme command is hardly noticeable ; it has confined itself to keeping in reserve troops of which no use whatever was made.

In 1870 Moltke again fights a great battle, that of August 18, at Gravelotte-Saint-Privat. The German army corps advance shoulder to shoulder against the position where Bazaine has deployed his troops. Seven corps (VIIth, VIIIth, IInd, IXth, IIIrd, Xth, and the Guard) are piled up on a width of 12 kilometres, say with an average density of 15 men per metre. It is true that the infantry of the IIIrd and Xth Corps, kept in reserve behind the centre, will not have to be sent in. Finally the XIIth Corps (Saxons), which is on the extreme left, advances while still remaining glued to the Guard, and brings off an outflanking movement with one single brigade.

When drawing near Sedan the two German armies are again held closely together. During the evening of August 31 they extend over a width of 17 kilometres for $8\frac{1}{2}$ army corps, or an average of 2 kilometres per army corps. One is amazed to see an army thus closed together succeed in enveloping its adversary ! But the latter had bunched himself up in a triangle of 4 kilometres side, and no longer moved.

In any case we perceive in the three great battles directed and won by Moltke a marked preference for the outflanking movement as against the turning movement.

The pupils or lieutenants of Moltke conform very precisely to the same doctrine. In every partial combat commanders of all ranks manœuvre

by wings; their tendency continually to outflank the enemy by degrees produces the complete outflanking movement on one of the French wings, as is the case with the Saxon brigade which brings about the fall of Saint-Privat, and the Prussian regiment which brings about the fall of Froeschwiller; on the other hand, one hardly ever sees a combined movement for a battle or a big fight projected or ordered; and except in the case of the battle of Le Mans there is never a turning movement.

At Froeschwiller all the troops of the Vth and XIth Corps are committed to a frontal fight: it is through the initiative of a brigadier-general that a regiment is sent to the left, outside the front of the French, to come in on their right flank; and this simple movement determines the French retreat along the whole line, and hastens their disaster. Would not the victory have been more complete and less expensive if the outflanking movement had been ordered by the supreme command, carried out sooner and with a more numerous body of troops? No one will dispute it; but, according to Clausewitz, such a manœuvre would be better suited to exploiting the victory than to procuring it; it would offer uncertainties, even dangers, which should lead to the adoption of a less ambitious method.

In all the battles fought during the second portion of the war the conduct is the same: tendency to the outflanking manœuvre in officers of every rank, but no flank attack prepared by the supreme commander. The lessons to be drawn from this are in keeping with one another.

The battles of Beaune-la-Rolande, of Loigny, of Josnes-Beaugency do not show very definite manœuvres, but the various French corps were always dislodged by outflanking attacks. However little pronounced they may have been, these latter almost at once gave the result which would have been sought in vain from a frontal attack carried out by considerable forces.

If the outflanking movements always led to success, and showed themselves indispensable to obtain it, it was not the same in the case of turning movements. The manœuvre attempted by the French at Pourpry against the left flank of the Germans was got wind of in time and stopped. It was the same with the only manœuvre on a wide scale attempted by the Germans—that of the XIIIth Corps at the battle of Le Mans. This corps, detached openly against the left flank of the French by the Paris and Nogent-le-Rotrou road, while the main body of the army came by the Vendôme road, was reported in time and stopped. It neither produced a decision nor even indirectly led to one.

Speaking generally, the manœuvre with a wide scope, the manœuvre always desired and sometimes accomplished by Napoleon, was only attempted once or twice in 1870, and that without success. The method being known, the turning movement foreseen by the adversary, and reported more quickly, thanks to the advance made in methods of communication and in cavalry, the secrecy necessary to the success of the manœuvre is difficult to obtain.

The impossibility of taking a naturally strong and well-prepared position *frontally* shows itself everywhere. Already proved by the battle of Gravelotte-Saint-Privat, it is again demonstrated by the attacks of the French against the edges of Villiers and of Coeuilly (in front of Champigny), and against the park of Buzenval. It is above all proved by the battle of Héricourt, where Werder's small army resists that of Bourbaki with a density of barely 12 men to 10 metres.

On the other hand, the improvement in weapons, by compelling the abandonment of formations in close order, the only mobile ones, and by binding the fight more closely to the ground, still further fixes the troops engaged. The battle holds face to face two thin lines almost incapable of any manœuvre, and, when the general reserves are pretty well used up, it only requires an outflanking movement carried out by the very smallest unit to crumple up everything from flank to centre. This is the story of Froeschwiller and Saint-Privat. Thus, as a general proposition, the method followed by the Germans in their battles of 1866 and 1870 appears to be justified: try always to outflank, not to turn, the enemy. We shall see how more recent wars have brought to light again the advantages of turning movements with a wide scope.

In the second part of the war of 1870, regular troops, well officered and trained, and experienced in war, contend against improvised armies which sometimes have on their side superiority in numbers. When, as at Coulmiers, the superiority is

crushing, decisive results can be obtained by the newly raised levies. These latter also prove, at Loigny, for instance, that with equal numbers they are able to act with vigour and not without success in the frontal fight; but one notes everywhere that, for lack of sufficiently well-trained officers, these improvised armies are masses which it is difficult to get to perform evolutions, and cannot obtain victory by manœuvre, and, consequently, are incapable of bringing off a decisive success.

Well-officered troops, on the contrary, compensate for their numerical inferiority by the quickness of their manœuvres. As at Pourpry, they form front to unforeseen attacks by bold movements which are helped by the very smallness of their numbers, and which their enemy cannot check. On the other hand, they cannot obtain complete success in the battle, for every attempt to carry out an outflanking movement obliges them to divide up into detachments separated by wide intervals.

Improvised troops, although able to succeed in an attack which is briskly led, do not make good captured positions as do regular troops. It is especially in this respect that the difference in staunchness between the two shows itself.

§ 2. LIAO YANG

The Japanese march on Liao Yang by two roads: on the east that which comes from Antung is followed by the 1st Army (Kuroki); to the

west the 2nd and 4th Armies (Oku and Nodzu) advance along the railway. The Russians try to stop them in an advanced position at about 25 kilometres from Liao Yang; their forces are divided into two groups corresponding to the two roads of approach, with a reserve too far off to intervene. Between the two stretches a mountainous region, difficult to cross, 20 kilometres wide; the group which operates to the east is in the middle of mountains; that to the west is in a country of plains and hills.

The two portions of the Russian army are of about equal strength. In the plain the Japanese attack with a barely marked superiority, in the mountains with forces distinctly inferior in number. It is on this side that contact is first obtained, Marshal Oyama perhaps hoping to draw thither the attention of his enemy. General Kuroki attacks the front in vain, but one of his regiments succeeds in making the position fall by outflanking it, in spite of the difficulties of the ground. In the plain the Russians refuse battle. They again take up a defensive position, but this time a continuous one, 8 kilometres south of Liao Yang. On it they deploy on the west and centre 111,000 to 120,000 men on 18 kilometres. On the east they only oppose four divisions to Kuroki's victorious army.

This general, then, on August 31 dares to move by a night march in the middle of the mountains outside the enemy's left; he thus completely abandons his line of operations on Antung. What he has seen up to then of the enemy and of his

own strength gives him unlimited boldness; and in fact the Russian general, who knows precisely the numerical weakness of the 1st Japanese Army, is none the less anxious at feeling it on his left flank. One never knows what may happen!

On the opposite side the armies of Nodzu and of Oku attack with 70,000 men the 110,000 Russians deployed on 18 kilometres; they succeed in outflanking them. A hostile detachment of unknown strength comes and threatens their left flank; but without allowing themselves to be worried they oppose it with a small body of troops which succeeds in stopping it. They carry the strong positions on which the Russian right rests; General Kuropatkin orders a retreat.

The fight in the third position, quite close to Liao Yang, is nothing more than a rearguard affair.

To sum up, this battle lasted from August 26 to September 4 for Kuroki's army; from August 31 to September 4 for the others; the losses are about 20,000 men on either side, or 15 per cent. of the troops engaged.

If we consider only the zones in which there was real fighting, the density of the troops engaged was about 6 men to the running metre on the Russian side, and 4 on the Japanese side. These figures would have to be materially reduced if we counted the space left empty between Kuroki and Nodzu as being in the battlefield; but in that case we should have an incorrect idea of the physiognomy of the battles fought in front of Liao Yang. In truth the density of the

troops was comparable to what it had been in former battles.

If we go into detail we find remarkably instructive incidents :

1. Frontal attacks fail. They are very lengthy, requiring one day for reconnaissance, one or two for the approach march. General Kuroki seeks for victory by an attack on the centre; he does not get it in this way, but through the outflanking movement carried out by a regiment ;

2. Only outflanking movements obtain success, and victory remains to that one of the two adversaries who has the last word to say in this matter. We have seen how General Kuroki pushes the application of this principle to the extreme limit; his boldness deserves that we should dwell on it. He recognises that his attack on the second Russian position would fail endlessly; he wants at all costs to act effectively, and that can only be done by gaining the enemy's flank.

"On this day of the 31st August General Kuroki carries out one of the *boldest* manœuvres which history records.

"His line of communication is the road from Liao Yang to Seoul; besides this track there are only mountain paths; at first he leaves three brigades to guard it; then, at the time he is about to make his offensive movement, he takes away one of these brigades to reinforce his offensive. At the time when he summons to himself the rest of the 2nd Division he knows that the Guard may have to contend with the whole of the Xth

Russian Army Corps. He plunges into the unknown then with the certainty that the Mandarin road, whose preservation is for him a vital matter, is guarded by two brigades and is threatened by four.

"He will risk the adventure with a force of two divisions, which it is true will soon be supported by a reserve brigade, and will throw himself against an adversary of the strength of five infantry brigades and a cavalry division.

"At a given moment his flank and rear will be threatened by Samsonoff's Cavalry Division and Orloff's Infantry Division; *this will only lead him* to assume a still more energetic offensive." [1]

Such an offensive spirit was bound to win against the passivity of the Russians, and alone suffices to dispense us from any other explanations.

§ 3. THE SHA-HO

In the battle (or battles) of the Sha-ho the preparatory dispositions seem to have been well made by the Russians to ensure success; on the eft wing General Stakelberg had at his disposal three army corps to attack three Japanese brigades on a front of 20 kilometres. All the attacks were fruitless, owing to faults of execution. Considerable forces were used against the *point d'appui* of the extreme right of the Japanese, Pen-si-hou, which was attacked in front and in reverse; but the attackers did not cover themselves and hardly reconnoitred at all; at the moment

[1] Colonel Cordonnier, "Cours de Stratégie et Tactique générale de l'École sup. de Guerre."

when they were about to seize Pen-si-hou a Japanese cavalry brigade in its turn took them in flank and, by the fire of its machine-guns, inflicted on them heavy casualties in a few moments. These losses and, above all, surprise made the Russian infantry give way. Rennenkampf's cavalry was absent at the critical moment.

Not far from there the Russians took several positions, by means of which they might have pressed their offensive and obtained a decision; but the reserves had been kept far from the first lines; the troops who conquered the Japanese positions remained there without support and, some time afterwards, were driven out of them. Then the Russian reserves were put in motion, marched to the attack in deep columns, and were scattered by the fire of two companies.

Marshal Oyama wished to attack with his left; he had only allotted to Kuroki's army a defensive rôle, and depended on the united efforts of Oku and Nodzu to outflank and push back the Russian right. Although these two generals gained repeated and notable successes, the battle as a whole did not take the shape desired by the marshal, who during the later days formed other plans.

The Russians had sufficient superiority in numbers to enable them to make head against the whole Japanese army while they were piling up three army corps against Kuroki's right. General Oku's army, therefore, did not succeed in outflanking the Russian right. In return the Russians had made the mistake of not forming

a continuous line, but of holding a certain number of isolated points which formed so many salients; each of these *points d'appui* was enveloped in turn by the Japanese attacks. In this way the Japanese left succeeded in driving back the Russian right without requiring a big outflanking movement; but it is above all in the centre, which was less strongly held, that the Japanese Guard obtained marked success; by taking several isolated *points d'appui* it succeeded in piercing the Russian centre and then wheeled a large part of its force in towards its left.

Thus the Russian right found itself pinched in between the Japanese left and centre; the Japanese Guard in its turn had its right very much in the air and exposed to counter-attack.

A brigade was detached on this side, not to accentuate the success obtained, but to fill the gap made by the left wheel of the Guard, while Marshal Oyama made every effort to converge against the Russian troops already almost surrounded. These, however, were able to free themselves, and a general retreat on the part of the Russians put an end to the battle.

Here Russians and Japanese (200,000 men against 160,000) fought on a front of 48 kilometres. They did not engage in two or three partial battles, but in twelve to fifteen fights for localities. On the Russian side want of skill in minor operations, and on the Japanese side inferiority in numbers, prevented any general plan succeeding. The victory of the Japanese is due to their superiority in all the details of fighting, and above all to their

spirit of the offensive pushed to the extreme. The battle of the Sha-ho shows us a remarkable instance of an attack on a point of a front which succeeds in completely piercing the enemy's centre. On this subject one may note that this local success, important as it was, had not been foreseen, and could not have been. No reconnaissance could warrant the presumption that there would be no Russian reserves near the point attacked. When the Japanese Guard found itself hurled into the heart of the Russian positions, with its right completely in the air, it only needed that the enemy should have a brigade on this side to transform suddenly into disaster the success gained. At 1st Army Headquarters anxiety was intense. Let us add finally that since the decision had not been sought at this point by the supreme command, the success of the Guard could not be followed up on a large scale so as to bring about the complete breaking in two of the Russian army.

This latter had over its positions as a whole a depth of 4 men to the running metre. Comparing this figure with those provided by former wars, one does not find it too weak to admit of a serious frontal defence. Contrasting it with what has happened in other battles, it seems that, with such a density, the Russians could have organised a line of defence capable of making a more protracted resistance. But when it is a case of deploying on a line of 50 kilometres one rarely meets with a continuous position; the ground offers alternations of heights and depressions, strong points and weak points. The defender then thinks

that he will make a judicious economy of forces by only holding and preparing the strong points and neglecting the intervals. He forgets that in fortification the curtains have their place as well as the bastions, and together with them compose a continuous enceinte. If we must undertake the defensive, it can only be done with a continuous line. It cannot be held everywhere in as little depth as we could wish; often we shall even be unable to avoid having recourse to the offensive at certain points which are too unfavourable to the defensive. From this we must conclude that if on the one hand recent progress in weapons has admitted of the holding of good defensive positions with very weak effectives, on the other hand the fronts on which armies of 200,000 men and more deploy are such that we can scarcely find favourable positions of sufficient extent. It seems that even on the front itself the absolute defensive is not admissible.

As far as the attack on a centre is concerned, we see that success can hardly be foreseen, nor above all can the point be determined in advance where the break will occur. To profit by it when it does occur it is necessary to pour strong reserves into the gap immediately. Mounted troops alone seem able to fulfil the required conditions of being brought in good time to *any point whatever* of these immense fronts.

§ 4. MUKDEN

The battle of Mukden (from February 27 to March 8) again shows the inefficiency of the Russian troops; they are evidently unable to give

effect to any of the plans which their Commander-in-Chief may form, should he form any. When Nogi's Japanese army, for instance, appears on the right flank of the Russians, very superior forces are opposed to him without being able to stop him. On the other hand, well-prepared positions are defended to the bitter end, and the Japanese only take them by compelling the Russians to retreat by outflanking movements.

Marshal Oyama initiates the frontal attack with his three old armies (Kuroki, Oku, and Nodzu). The two armies recently come from Port Arthur (Nogi) and the Ya-lu (Kawamura), kept at first in rear, and out of sight, will be entrusted with outflanking movements which the endeavour has been made to initiate in secret.

Kawamura is sent forward first on the right, in the mountains. It was intended he should draw there a large part of the Russian reserves and thus free the ground in front of Nogi, and that the latter, starting then, should advance on the left against the flank of the Russians.

We thus find ourselves confronted with a preconceived and skilfully organised operation. The event was to show the Japanese that they would have done better to operate more widely. Nogi, having most accurately overlapped the enemy's right, comes in on his flank and then sees that he would have done better to push boldly beyond it, so as to take the Russians in reverse and come straight upon Mukden. He profits by the inertia of his adversary to gain ground to the northward by a flank march made under

his very nose. At the same time he forms a cavalry corps which will extend his action still farther to the north.

The absence of strong general reserves among the Japanese has been commented on and almost criticised; but all their forces were employed as actively and usefully as possible. Inferior in numbers to their enemy, they knew how to produce, both in the details of the fighting and on the battlefield as a whole, those outflanking movements without which there was no possibility of victory; their numerical inferiority did not allow them to do more. In fact we ought to be astonished at the wide scope which the movement against the Russian right was able to assume.

The Mukden manœuvre seems to be that which will usually be imposed by the experience acquired during the last century. Napoleon, as we have seen, conceived three operations in battle, each fairly clearly defined: (1) a frontal fight absorbing almost the whole of the adversary's forces; (2) an attack against one flank of the enemy, disturbing him, shaking his morale, and forcing him to upset his battle array to meet it; then, almost immediately (3) the final attack, driven home with all the cavalry and artillery and with the requisite amount of infantry.

In our day it is difficult for the assailant to exhaust the forces of the defender, as he could a hundred years ago, by a frontal fight only; the defender can greatly reduce the depth of his lines on selected positions. It is, then, by successive overlapping outflanking movements, which the

defender is driven to meet, that we may lead him to use up his reserves: it is thus that the Japanese acted at Mukden. The more economical, the more skilful, and the stronger of the two adversaries succeeds in retaining the last fresh troops, and then passes to the second phase, attack on the hostile flank, which threatens the enemy's line of retreat and produces disorganisation in his units. This is the attack which the Japanese carried out with Nogi's army. The experience of the Russo-Japanese War, like that of 1870, has proved that the least outflanking movement decides the entire victory; but the Japanese experienced at Mukden, and demonstrated by their actions, that when the enemy lends himself to it, it is most advantageous to have recourse to a turning movement with a wide scope, which exerts a prompter and more effective threat on the hostile line of retreat.

The battle of Mukden, especially compared with that of the Sha-ho, shows what the defensive in modern battles can do. On the Sha-ho the Russian front, on which the troops had a density of 4 men per metre, was easily pierced by the Japanese. It would seem that this was so because it was not continuous. At Mukden the front was continuous; it was covered with an uninterrupted trench; it held good for eight days, and the retirement was only brought about by the turning movements carried out on the two wings. Yet the density of the troops was no greater there than it had been on the Sha-ho, and the assailants were more numerous.

It would seem clear then that a position cannot

be held unless it is fortified; this is a principle which Napoleon had already laid down.

It is also necessary that the position should be continuous and should not contain gaps. From this, as we saw at Mukden, the obligation arises of making immense lines of entrenchment, 30 to 40 kilometres in one piece, such as were made two centuries ago to cover provinces. The long lines of Mukden are characteristic of modern defence.

From this follows a most important deduction; if modern weapons admit of holding defensive positions with fewer troops than formerly, on the other hand it is impossible to distribute the forces very unequally. As an average, we can do with a fairly small number of men per running metre, but on no part of the front can we afford to come down much below that average. The offensive, on the contrary, can choose points for attack, and on them concentrate its efforts. By an uneven distribution of its forces it can compensate for the saving in men realised to the defence through the strength of its positions.

CHAPTER IV

THE MODERN BATTLE

§ 1. CAVALRY IN BATTLE

If cavalry no longer gives the *coup de grâce* to the vanquished, as it formerly used to do, it is because generals do not try to employ it to do so. The Prussian cavalry at Sadowa was only waiting for the signal to pursue; the King of Prussia, it is said, refused to let it charge in order to spare the enemy (?). What would have been left of MacMahon's army after Froeschwiller if the German cavalry had pursued energetically on the Niederbronn road? At such moments beaten troops are without resisting power.

Even if one must no longer reckon on useful charges during the course of the battle, cavalry remains essentially the pursuing arm, that whose action is the most irresistible and most efficacious on demoralised troops in process of breaking up. Perhaps at times it will be necessary for it to use its carbines against some units still capable of offering resistance, but very often it will still be able to produce great results by the mere rapidity of its action.

"Whenever possible," said Napoleon, "we should

always prefer the thunderbolt to the gun." There are no mounted troops, however little accustomed they may be to the use of the sabre, who have not found opportunity to charge rather than to shoot. The Boers, who normally only used the rifle, and merely employed their horses as means of transport, charged several times when they fell unexpectedly upon British troops. The great cavalry leaders of the American Civil War, in spite of the great use they made of dismounted action, made numerous and fine charges.

We must not, however, become a prey to catchwords, and overdo the assertion that cavalry may find opportunity to intervene "during the course of the battle." On the front there is only room for skirmishers lying down and for concealed batteries. For the matter of that, let us think of some former battle, of Saint-Privat, Coulmiers, Mukden; at what moment in any one of these battles can we conceive the apparition, even if it were instantaneous, of a body of cavalry charging, were it but a single squadron? Undoubtedly cavalry must still charge and so obtain great results, but it must be outside the front or in the pursuit.

The opportunities for charging are only to be found in a very limited number of cases; if to this we add the fact that in the wars which have taken place in Europe since 1815 the opportunity of charging was, so to speak, never found, we should be tempted to infer that the rôle of cavalry is becoming insignificant, and that the arm may be reduced without inconvenience.

As a matter of fact, cavalry has never been more necessary, and cannot be too numerous, provided it is handy in fighting with shock and fire action, according to the circumstances of the case.

"We have expended a considerable number of millions," says Rudyard Kipling, "to prove once more this fact, that horses go faster than men on foot, since 2 and 2 make 4." And it follows that men on horseback will do better service than men on foot, provided that they do not, on the pretext that they are mounted, abandon the weapons which are used by men who fight on foot. In a word, there will never be horsemen enough if, while ready to charge as soon as opportunity to do so offers, they do not confine their action to these extremely rare occasions.

There is one very remarkable fact in the decisive manœuvre at Mukden; it is the necessity recognised by the Japanese of forming a cavalry corps to extend the turning movement and reach the enemy's line of retreat. It would seem, in fact, that in future only mounted troops will be able to carry out the decisive manœuvre with the rapidity and secrecy indispensable to it. When Napoleon introduced great turning movements in battle, he was able for some years to give effect to them by means of army corps directed in advance against the flanks. The enemy did not foresee such operations, and did not dream of countering them. Nowadays this is no longer so, we can only bring off a surprise by keeping the troops intended for outflanking movements out of sight, that is to say, usually

in echelon *behind* a wing of the army. They are thus concealed until the moment when they pass the front of the troops already engaged. But if corps which come out like this are infantry, it is difficult for them from the moment they have revealed themselves to carry out a movement of any great scope. Only mounted troops can throw themselves quickly on the flank of the enemy far enough back to threaten or perhaps even reach his lines of retreat.

A numerous cavalry is necessary therefore to give the rapidity and power requisite to attacks in flank and in reverse. It will also be necessary to form strong reserves suited to putting to good account the partial successes gained on the front at points which cannot be foreseen. We have seen that the great turning movements to which Napoleon was accustomed became difficult to bring off, because it was almost impossible to conceal from the enemy the march of the troops charged with their execution. Mounted troops alone can obtain the indispensable surprise effect, and can outpace, if not the information of their movement, at any rate the move made to counter it.

The dismounted action of cavalry is as old as firearms. It was practised in the sixteenth century. In Turenne's battles the dragoons formed great swarms of skirmishers. Little by little the custom was forgotten, and, in spite of Napoleon's efforts, dragoons hardly ever fought except as horsemen, sword in hand. After 1815 all European cavalry forgot the use of the carbine,

During the American Civil War a reaction came about in this matter. The cavalry of both sides, armed with carbines, made considerable use of them during raids and in battle. Dismounted action was their customary procedure. For instance, at the battle of Cedar Creek, on October 18, 1864, the Federals were on the point of being beaten when Sheridan intervened with his cavalry. He dismounted his men, made them take their carbines, and attacked the Confederates, who were establishing themselves in the captured positions; he threw them back into the valley of the Cedar Creek and recovered the victory.

Six months later, Lee's army, beaten and almost surrounded near Richmond, succeeded in slipping away; but Sheridan's cavalry overtook it, passed it, dismounted, and barred its road. Lee, checked in his retreat, was soon surrounded and capitulated in the open field. These decisive exploits, accomplished carbine in hand, did not prevent the American cavalry from charging sword in hand when the opportunity offered, thus proving that dismounted action is in no way incompatible with the cavalry spirit.

The lesson was thrown away on all the cavalries of Europe. In 1870 the Germans had not even got carbines. The Transvaal War produced a pretty sharp reaction. It was quite clear that it was not possible to acclimatise in Europe the organisation and methods of fighting of the Boers, for lack of the peculiar circumstances which had called them into being; but it was none the less evident that the British infantry encountered serious difficulties

from the mere fact that its adversaries were mounted and were extremely mobile. The British found themselves driven to make calls on the cavalry or, for want of cavalry, on what was termed mounted infantry. They have got so used to it since then that they have now made its employment customary. In his reports on the Manchurian battles, General Ian Hamilton notes numerous cases where the intervention of a body of cavalry would have had most far-reaching results.

Up to now French cavalry has hardly gone in for dismounted action except in its defensive aspect, but it is above all the offensive fight which it must undertake, supported by its guns and machine-guns. Its task is to move rapidly to decisive points, and there to attack, not merely to defend itself. German cavalry for some years now has set it the example in its manœuvres.

§ 2. BATTLE IN THE TWENTIETH CENTURY

The battles of Liao Yang, the Sha-ho, and Mukden differ much, in their vast proportions, from those which had been fought till then. Do they give us a correct idea of what the battles in a future European war will be like? It must not be forgotten that it is not 200,000 or 300,000 men, but 1,500,000 or 2,000,000 who, for instance, will be engaged on either side in a Franco-German war; and we may anticipate a battle which will bring to grips 3,000,000 of men on a front of 300 to 400 kilometres.

It is true that in an important study of the

warfare of the future a German military writer[1] governs the operations in such wise that the decision is brought about by a series of partial battles fought at different dates and in different places. The greatest of these battles is thus found to be no greater than the proportions of Mukden.

One may therefore still admit cases in which the battles of the future will be comparable to those fought in Manchuria.

However, each of the two adversaries having united his armies in a zone barely wide enough to hold them, and intending to act with as much unity as possible, there will be a tendency to bring about one single battle. The various armies no doubt will not fire their first guns on the same day, but the frontal engagements will be sufficiently lengthy to give time for the wing armies to come into line before a decision has been reached and thus to participate in one and the same battle.

The great difficulty inherent in bringing all the troops into action simultaneously leads almost of necessity to those successive comings-up into line of which Mukden has given us the example.

As we have seen by the battles fought for the last hundred years, success can be obtained in very different ways; breaking a front can be done, but one cannot reckon on it, will it, prepare it; moreover, a local success at a point in the front creates deadly difficulties for the victor. With equal forces the enveloping situation gives very

[1] General von Falkenhausen, "Der Grosse Krieg der jetztzeit," Berlin, 1909.

marked advantages. The more armies gain in power, the more pronounced do these advantages become, in such wise that, of two equal armies, that one which would succeed in piercing its adversary's centre will perhaps, by its very success, place itself in a most dangerous situation.

The attack of a flank is to-day more than ever the most sensible form of the offensive.

We have seen by the examples of the First Empire, and perhaps even more by that of Mukden, the advantages of great turning movements. On the other hand, Moltke always preferred to them outflanking or overlapping movements, which seemed to him less ambitious and more prudent. Napoleon himself was satisfied with these when he had to attack an enemy very strong materially or morally. It would be absurd to predict that the operations of the future will deliberately assume the one form or the other. What, on the other hand, does seem certain is that the general will no longer plan and carry out a manœuvre or an attack with the astonishing precision which Napoleon brought to it.

It will be remembered that in such battles as Castiglione, Wagram, Lutzen, Bautzen, Wachau, the attack directed against the hostile flank had not for its aim to produce a decision immediately and directly. Its function was to absorb the enemy's last reserves, and Napoleon was wont to seize the precise moment when this result had been achieved to order the general attack. However, at Eckmühl, at Eylau, at Dresden, and in all the battles fought since then, at Sadowa as at Ma-

genta, at Gravelotte as at Mukden, the corps which turns or outflanks a wing of the enemy does not give the signal for the decisive attack; victory results simply from the convergence of the two attacks on an adversary who cannot form a front to both. It would seem that it will be so in the future. The synchronisation necessary to the skilful Napoleonic manœuvre is henceforth a little difficult to ensure, and moreover it is useless. Telegraphs and telephones, with or without wires, will at a pinch supplement direct orders over the battlefield. We can picture to ourselves clearly Marshal Oyama, at Mukden, informed within the hour that the IIIrd Army had come up into line, and telegraphing no less quickly to the other four armies an order for the general attack. What does not appear so clearly is the utility of synchronisation. The flank attack will react right up to the far end of the battlefield, though after a space of time which we cannot estimate.

If we cannot copy the actual manœuvre of Napoleon, at any rate we must not renounce seeking inspiration in it. We will ask of the flank attack that it should determine victory. It is always of the general attack, ordered at the critical moment, and of changing attack into pursuit, that we must demand decisive victory—when we are strong enough.

The battles of the future seem at first sight to comprise less manœuvring than those of the last century. Whilst the plan of a Napoleonic battle shows harmonious proportions, about as much width as depth, a division of the force into

two almost equal portions, destined respectively to the frontal fight and to manœuvre, we might anticipate that the considerable front on which modern armies deploy would absorb the greater portion of their strength and so leave them small available means for the decisive operation. It is enough to turn to the battle of Mukden to see that nothing of the sort will occur; out of five Japanese armies, three manœuvred; only two fought frontally during the entire period of the struggle.

Two centuries ago, was it not also believed that battles could only show the linear form, and did not Frederick, before Napoleon, almost immediately break the uniformity of the so-called classic mould?

It is Frederick also who pressed to the utmost inequality in the distribution of troops; his oblique order, the promptness of his movements and attacks, allowed him to cap one end of the hostile line, and to crush it under fire, without engaging anything on the opposite wing.

After him the depth of the first line is pretty well the same along the whole front; the troops charged with the outflanking or turning movement are deployed like the others. It is by the play of the reserves that victory is determined.

Placed near the point where Napoleon sought for a decision, he engages them and deploys them in such a manner as to obtain superiority of fire at the decisive point. They are still used sometimes to re-establish the fight along the remainder of the front. A century ago all the available troops could be kept in reserve at some single spot, to

be directed thence either against the flank, or the centre of the enemy. In our time the extent of battlefields hardly admits any longer of this simple solution; it is impossible to keep a body of troops in such a position that it can intervene at the different extremities of the battlefield.

This ever more necessary use of reserves gives rise to the greatest danger which threatens the higher command. An irresolute commander does not engage his reserves early enough or in such a way as to impose his own initiative; he wastes them in timid counter-moves, or, on the other hand, he fears to use them, and that is the most grievous fault which can be committed in battle.

On the front the fight will be more prolonged than it used to be; but we must not exaggerate to ourselves its duration. The same troops will not fight for more than two days without becoming exhausted. It is therefore indispensable to keep reserves ready to intervene on various portions of the front, if the attack on which we reckon to decide the victory requires more than two days. There lies one of the great difficulties with which the genius of the commander will have to contend in a modern battle; he may find it necessary to deploy all his forces to obtain victory at the point where he seeks it (and this was so in the case of Marshal Oyama); while, for want of reserves, he may see his front broken before he has succeeded in his attack.

To this aspect of the case the Napoleonic method does not seem susceptible of adaptation.

Perhaps the generals of the future will rather approximate to the oblique order as Frederick applied it at Leuthen and Rossbach. While the bulk of the force operates offensively on one of the wings, the other may, not indeed fight *en retraite*, a most dangerous if not impracticable proceeding, but be reduced to a screen of light troops, capable of deceiving the enemy for two or three days.

Cavalry in large numbers with its cyclist supports, etc., will render the most valuable services in forming such screens, as also in promptly extending the turning movement towards the enemy's communications. For sudden concentrations railways may be used.

Resources will not be lacking to him who will and can make use of them. It will undoubtedly require skill to conduct the battles of the future, as it has in the past. The problem of the twentieth century will be neither easier nor more insoluble than that of the eighteenth; to solve it well demands a powerful and ingenious mind which has at its disposal all the new means for grappling with the new difficulties. Masses and distances have increased, but similarly means of communication have improved. That same progress which has admitted of concentrating and feeding, and consequently of employing, the enormous armies of to-day, ought to help in bringing into action the masses of men on the immense areas over which they will be spread.

We have been able to trace throughout the course of history the struggle between the defensive

and the offensive. It is a platitude to state that the offensive alone brings victory, that the defensive only allows time to be gained or men to be economised. It is a truth for all time; it will dominate the battle of the future as it has that of the past. But we must ponder this other truth, no less eternal, that the defensive cannot always provide even the advantages which we think of demanding from it. To be able to economise troops in defending a position two things are necessary—that the position be strong and be strongly prepared, and above all that the enemy comes there to attack us.

It is necessary to have a position which is strong by nature, and it must be entrenched and its defence organised; but it must also be continuous and homogeneous, and it must not present salients like that of the Russians at the Sha-ho; it must be occupied at every point and not in a disconnected fashion.

It is necessary that this position be attacked by the enemy, and that with forces superior in number to those deployed on it; failing this, its function is not fulfilled. If we find that the enemy does not attack in strength, there remains the alternative of assuming the offensive; but here again it is necessary that our position shall lend itself to the offensive, particularly that it should not be covered by some big waterway whose defensive value thus turns against us.

A century ago an army often found good defensive positions admitting of an easy assumption of the offensive. They become rarer and

rarer as fronts extend. To-day it is no longer mere accidents of ground but great geographical features which admit of the formation of defensive positions of sufficient extent. These will almost always be provided by streams or rivers, and thus they will be very defective, precluding resumption of the offensive.

And so the defensive would seem to be doomed to further loss of its advantages. Everything leads us to anticipate that the battles of the future will be collisions of armies acting offensively, that is to say they will be encounter battles.

Formerly, by this expression were understood unexpected engagements in which both sides found themselves at grips without having had time to make a plan of action. But this mutual surprise is no longer the characteristic of the encounter battle. That which distinguishes it from those we have studied is that both adversaries operate offensively. Neither has established himself on a defensive position, but both of them are quite well aware that they are marching the one towards the other, and the encounter will not surprise them.

The reconnaissances will be quicker and more sketchy, the part played by the unforeseen will be greater. Since the attacks do not knock up against prepared positions they will succeed more easily. Breaking the enemy's line will be more possible of attainment. To sum up, the relative worth of the two commanders will make itself felt more strongly; victory will soon be to him who displays most resolution, grip of the situation, and imagination—*it will be to him who knows how to act quickly.*

It will also be his who *can* act quickly. He must have his forces well up, his main bodies at but little distance from the advanced guards, his columns relatively short; briefly, march dispositions which are pretty well the opposite of those we practise with a view to attacking a prepared position.

§ 3. THE RESULTS OF BATTLE

The object of the battle is the ruin of the enemy's army. This result is hardly ever obtained in the battle itself; usually it requires pursuit to complete it. It is rare for an army to be as disorganised by battle as was that of MacMahon after Froeschwiller; and yet it would have needed a couple of days' pursuit to destroy it entirely.

In 1806 the Prussian army which was beaten on October 14 at Jena was only completely destroyed on November 7, after an uninterrupted pursuit of twenty-four days.

In the battle itself it is not the material losses suffered by the beaten army during the fight that reduce it to a state of inferiority; the victor has often lost more. An army declares itself to be beaten, not by reason of the losses it has already suffered, but *because of those it will suffer if it continues the struggle* in the desperate or very unfavourable situation in which its adversary has placed it. It is about to be hemmed in and crushed by projectiles, or else the disorganisation of its units no longer allows of dispositions being made, etc. It is in the last phase of a battle, in the charge that finishes the fight and begins the

pursuit, that the losses of the vanquished often become greater than those of the victor, and that the disintegration of the units is accomplished and disaster is prepared.

In the battle of antiquity the warriors, being ranged in a dense line, could not fight while retreating, they could only fly. And also, as soon as a wing was taken in reverse, the whole line was lost. Each man only thought of saving himself individually. The victor pursued and massacred. The combat (*prælium*) is followed by the slaughter (*cædes*). The losses of the victor are infinitesimal, those of the vanquished are enormous, sometimes as much as 80 per cent., and nearly all of them dead men; there are but few wounded men or prisoners.

It was the same thing up to the Thirty Years' War. Montluc still speaks of the butcheries in which "they killed hard all," when the enemy had given up resisting. Such butcheries seem quite natural to him.

If they have ceased since then, it is not because man has become better, but because he no longer often gets the chance of massacring. As soon as it offers itself he makes the most of it. Every time that there has been a hand-to-hand fight the victor has massacred the vanquished. He gives free rein to the desire to strike with which he went to the fight and he avenges himself for the fear which he has been made to feel.

The more the fight with the *arme blanche* disappears from the battle, the more these slaughters diminish. With them also the losses in battle

decrease; and in our own day the losses inflicted by the pursuit consist more in prisoners than in killed or wounded. These are the palpable signs of defeat; they may be more or less important, but that which actually makes the disaster cannot be weighed. It is the disintegration of units organised for fighting and forming front in different directions, which are unable to reassemble their scattered fragments and, pressed by the enemy, escape from all superior control. It is also the exhaustion and demoralisation of the soldiers, the loss of all confidence. These are the most important results of defeat, by the greatness of which we may measure the disaster.

An army may, as at Malplaquet, have sustained enormous material losses but, the enemy not having acted in a manner to disorganise it, to break it up, to put it into disorder, it is able to leave its positions quietly, to execute its retreat proudly, and to retain the hope of achieving a speedy success.

At Eylau the Russians lost 32 per cent. of their effectives, but their units were not dislocated, their army was not disorganised. They retreated with the hope of soon resuming the offensive. The victory of the French was but little accentuated. At Austerlitz, where the Russians lost only 14 per cent., their army was completely broken up and scattered: it was a decisive battle.

The disorganisation of the enemy's army is the essential aim to pursue in battle and it is often achieved by the victor at the price of material losses greater than those of the van-

quished. At Prague, in 1757, 64,000 Prussians beat 61,000 Austrians and won a complete victory; they lost 14,000 in killed and wounded, *i.e.* 22 per cent. of their effectives, and the Austrians lost 5,000 killed and wounded, or 8 per cent.

At Liao Yang and at Mukden the losses in killed and wounded are very much the same on both sides, which, since they were less numerous, gives 1 per cent. greater loss for the Japanese; but at Mukden the Japanese made 50,000 prisoners as a result of their turning movement.

So the victory is not always to him who has the fewest killed and wounded, and the defender too loses as much as the assailant. The difference in the losses of the two sides is made up above all of prisoners: the more the disorganisation of the vanquished is completed, the more he clings to his positions, the more widely the victor has manœuvred, the more energetically he has pursued, the greater will be the number of prisoners.

The number of prisoners taken in battle has been increasing: firstly, because in old days they killed instead of capturing; secondly, because in modern days manœuvres are conducted over a wider and wider area and pursuit is more vigorous. In return the proportion of killed and wounded to the effectives, and of these the proportion of killed, is continually diminishing.

In antiquity the beaten army often lost 80 per cent. killed. The victor lost few men. Taking the armies together, the usual proportion was 30 per cent. killed.

In the eighteenth century the losses fell to

25 or 30 per cent. in both killed and wounded. Examples:

Prague . .	Prussians,	22	per cent.	Austrians,	8	per cent.
Kolin . .	„	41	„	„	15	„
Zorndorf . .	„	30	„	Russians,	37	„
Torgau . .	„	27	„	Austrians,	31	„

This average drops considerably in the wars of the First Empire. Though there are still bloody days like Eylau, where the loss was 35 per cent., we find but 11 per cent. at Austerlitz, 14 per cent. at Wagram, 14 per cent. at Ligny, 24 per cent. at Waterloo. The average falls to 20 per cent.

At Sadowa the losses fell to 6 per cent.

They were from 17 per cent. to 18 per cent. in the big battles round Metz, and only 10 per cent. at Sedan. The average for all the battles between August 4 and September 4 was 10 per cent.; that of the battles of the second part of the war was only $3\frac{1}{2}$ per cent. This diminution is due to the difference in the value of the troops. The improvised armies of National Defence were not in a state to continue fighting when their losses had averaged $3\frac{1}{2}$ per cent.

The fights in the Transvaal show analogous returns—3 per cent., 5 per cent., 8 per cent.

The battles in Manchuria, in spite of their great length, only show 13 per cent. at Liao Yang, 10 per cent. on the Sha-ho, 12 per cent. at Mukden.

In modern wars the proportion of killed to wounded is always about 25 per cent. Thus,

instead of the 40 per cent. killed of the battles of antiquity, those of the eighteenth century only showed 6 per cent., those of to-day 2 per cent. to 3 per cent.

The duration of battles has greatly increased, while the losses have diminished. Also the losses suffered in an hour's fighting are diminishing very rapidly. They were from 4 per cent. to 8 per cent. in the eighteenth century; 2 per cent. in Napoleon's battles; they varied from 1 per cent. to 2 per cent. in the wars of 1866 and 1870. In the battles in Manchuria this average falls to 0·1 per cent. or 0·2 per cent.[1]

§ 4. THE DURATION OF ENGAGEMENTS AND BREAKING OFF THE FIGHT

The duration of an engagement, combat, or battle is a factor of the highest importance in calculations relating to operations. Of course a general can never foresee how long a combat will last, but he can try to form some approximate idea of it, based on the experience of the most recent wars.

The duration of combats and battles depends principally on the number of the combatants and the nature of the weapons. The more numerous the combatants are, and the wider the front over which the fight is spread, the more time is required to bring the operations to a conclusion. The greater the range and power of weapons, the more the reconnaissances and general preliminaries of

[1] Nearly all these figures are borrowed from Balck, "Taktik," vol. v. p. 82.

the battle are prolonged, the more time will be required for the approach marches.

Thus the duration of battles is always increasing. It averages about five hours in the middle of the eighteenth century; Napoleon estimated it at six hours, but it greatly surpassed this figure in his last campaigns. There were battles lasting two days, like Wagram, the Moskowa, Bautzen, Leipzig, because the movements preparatory to the decisive manœuvre could not be accomplished in a single day. The battle of Essling lasted twenty-one hours, and the average appears to be twelve hours, instead of the six indicated by Napoleon.

In 1870 great battles like that of Saint-Privat only lasted eight hours.

The battles in Manchuria were much longer; the most important of them lasted several days. Their length was, however, exaggerated by including the days occupied by preliminary reconnaissances, but they lasted at least three or four days. At Mukden six days were required to execute the turning movements undertaken by whole armies.

In this respect ground plays an important part: the more difficult it is to traverse, the slower the manœuvres become.

The character of the leaders and the value of the troops also exert a most serious influence: the better victory is prepared beforehand during the course of operations; the more skilful the general is in making his forces converge, in striking the enemy by surprise in flank; the

better the troops are officered, the more handy they are, and the more apt to execute the conceptions of the general with vigour and precision, the more rapid becomes the solution. With improvised, poorly officered troops the manœuvring is heavy and slow. The duration of a partial engagement, or combat, is a factor of capital importance in the plans of generals. We must know how long *given* troops can resist on *given* ground in order to know what manœuvre we can allow ourselves to undertake. The advance that should bring the manœuvring body of men into play should be accomplished before the frontal engagement has come to an end, etc.

Each particular case must be studied separately. In some circumstances the occupied position is of such a nature that an indefinite resistance may be offered. This is what occurred in 1796 at the redoubt of Montelegino, established on a narrow neck which the enemy could not outflank; this was also the case at the Bridge of Arcola.

On ordinary ground a body of men acting defensively and deployed in greater density than one man per metre, is able to resist a frontal attack by superior forces for a day. A turning or outflanking movement, on the other hand, would oblige it to retreat as soon as its flank was attacked.

To estimate the duration of a combat we must appreciate first the time necessary for reconnaissance and approach marches; secondly, the time necessary for outflanking movements.

For example, a very small unit with a front of

2 to 3 kilometres may be obliged to retreat in an hour or two. If it is able to protect its flanks, or cover itself by a watercourse, this period may be increased by reason of the time needed by the adversary for finding and forcing an unguarded passage.

A big unit, such as an isolated army corps, may offer resistance along a big front. If it holds 10 to 20 kilometres, an assailant, presenting himself at first on a similar front, would need from half a day to a day to outflank it. But if the assailant advanced at the outset on a sufficiently extended front to direct columns on to the flank of the defender at the same time as on to his front, the position would be evacuated in a much shorter time. If it is a question of a whole army or even of two army corps, the engagement cannot be so sudden, the assailant takes greater precautions, reconnoitres more carefully; the defender, in his turn, is able to make more combinations and bring his reserves into play. Thus Napoleon usually coupled his army corps together in pairs so as to be certain that when one part of his army obtained contact with the enemy it would always give him a day for his general concentration, and he would not be crushed.

Thus we arrive at examining the conditions in which a body of men find themselves who, in order to gain time, are sustaining a defensive combat against superior forces. To what state will it be reduced by the end of the fight? Will it be able to escape, should the occasion arise, without experiencing a disaster?

If this body of men has been completely engaged, that is to say, if both artilleries have got to the point of firing at each other at effective range, the breaking off of the fight is almost impossible. To attempt to bring the teams up to the battery position and withdraw the guns would be one of the most dangerous possible operations. There is no solution but to hold on as energetically as possible till nightfall. If the decision is reached before the end of the day, it will be extremely difficult not to leave a great part of the artillery in the enemy's hands. When a body of men has been ordered to gain time by fighting, it ought not to allow an engagement to be pushed beyond a reconnaissance, or commit itself to an actual fight unless it believes it can hold out till nightfall. It should continue to slip away until the hour is late enough to enable it to sustain the contest till dark. This is the way they behaved a hundred years ago, as is shown by the examples of Cervoni at Voltri in 1796 and of the Bavarians on the Isar in 1809.

§ 5. MORALE IN BATTLE

It is in the battle, the essential act of war, that moral forces act most powerfully and have their preponderant effect. We cannot repeat this too insistently. But whatever we may write about moral forces will not endow with them the man who has none. It is possible to write reams on the part played by decision, ardour, coolness, and all the qualities proper to a leader, but it is not of great

profit to do so. We will confine ourselves to quoting a few important remarks of the masters on the action of the commander in battle.

Napoleon, following Frederick II., declared that there was but one way of fighting—to attack. In discussion this truth has seemed indisputable, and yet we have been able to prove that certain of Napoleon's adversaries sustained graver reverses when they had tried to attack than if they had remained on the defensive. On the other hand, Blücher derived great advantage from his bold offensive at Lützen.

It seems quite clear that such a method of action, which is to be preferred if one is more skilful and, above all, more resolute than the enemy, is disastrous for a general who is less skilful and less resolute than his adversary.

During battle, character is put to rude tests. Movements undertaken are checked by the enemy, demands for reinforcements come from all sides, the menacing advance of the enemy is reported. We must hold on, we must persevere with the manœuvres we have undertaken, we must operate in such a way as to assure success by the employment of reserves. It is difficult to take suitable resolutions with all the speed desired; it is more difficult still not to lose one's head and not to despair prematurely.

"In war one sees one's own ills, and one does not see those of the enemy." [1]

There is in battle a critical moment in which the character of generals is more particularly

[1] Napoleon to Eugène, April 30, 1809.

revealed. Defeat seems complete; yet there are still reserves to be committed, it is still possible to grasp victory again. Prudent natures do not dare to use their reserves; they keep them for better times; yet Condé at Nordlingen and Bonaparte at Marengo would not accept defeat.

"Condé deserved the victory at Nordlingen because of the stubbornness and the rare courage that distinguished him. . . . Because, though it served him nothing in the attack of Allerheim, it prompted him, when he had lost his centre and his right, to begin the battle again with his left, the only body of men remaining to him. It is he who directed all the movements of this wing, it is to him that the glory of it is due. Observers of an ordinary kind will say that he ought not to have hazarded what was left, but to have used the wing which still remained intact to operate a retreat; but with such principles a general is certain to miss all the chances of success and to be constantly beaten. This is the way that Clermont reasoned at Crefeld, and Contades at Minden, and Soubise at Wilhelmsthal. The glory and the honour of arms should be the first consideration of a general who gives battle; the safety and preservation of the men is only a secondary affair. But also it is in this audacity, this stubbornness, that the safety of the men is to be found, for even if the Prince de Condé had retreated with Turenne's corps before reaching the Rhine, he would have lost all. It is thus that Maréchal de Contades lost in his retreat from Minden, not only the honour of his arms, but more men than he would

have lost in two battles. The conduct of Condé then is to be imitated." [1]

It is by following this principle that Napoleon turned defeat into victory at Marengo, but into disaster at Leipzig and Waterloo. However admirable determination may be in a general, it should not be blind. It should not be unlimited, unless he has been forced to fight with no hope of victory, and is fighting for honour only.

"Keep these three things in mind—assembly of forces, activity, and the firm resolve to perish gloriously. Death is nothing; but to live, beaten and without honour, is to die every day." [2]

[1] Napoleon, "Précis des Guerres de Turenne."
[2] Napoleon to Lauriston, December 12, 1804.

PART III

OPERATIONS

CHAPTER I

WAR IN FORMER DAYS

§ 1. OPERATIONS AND BATTLE

We have studied the battle in itself in order to learn its form and its development, to discover the causes of success, to appreciate the time and sacrifices necessary to obtain success according to circumstances, to imagine the situation of the two parties at the end of the struggle. But the battle is the decisive and characteristic factor of war, it is the essential agent of final success, and from henceforth we shall examine it from this point of view.

Present-day military philosophers think that the importance of battle is a recent discovery. To listen to them we might believe that war was made for a long time without men realising that weapons were taken up in order to fight, that battle decided the fate of armies. It was only too well known!

Feuquières, in the seventeenth century, said "that battles are the general actions of one army against another, that often they decide the success of the whole war, or at least—almost always—of the campaign."

It is by means of battles that the goal of war is reached, or at any rate that we advance towards the goal. Operations in their entirety have for object the preparation of the battle for him who hopes for victory; the exploitation of the battle for him who is victor; the avoidance or the attenuation of the battle for him who fears the encounter; the concealing and reconstituting of his forces for a fresh struggle for him who is beaten. *The thought of battle dominates all the operations of war.*

In the combat and the battle one can clearly distinguish two attitudes, offensive and defensive. The offensive is not less clearly accentuated in the operations taken as a whole, but it is not at all the same thing with the defensive. The term "defence" or "defensive"—if one takes, as one should always do, the ordinary meaning of the word—is only applicable to him who accepts the fight, and in it resists the aggressor, but the conduct opposed to the offensive also consists, and particularly consists, in avoiding or postponing battle. And this is what many military writers, for the sake of simplification, call the "strategic defence," but this abuse of words has its effect on ideas, and leads to inexact conclusions.

When one of the belligerents is convinced that for the time being he is the stronger, he longs for battle, he desires it, and he wants it to be as decisive and as prompt as possible. Most frequently he marches out to meet and beat the enemy as quickly as possible. As far as operations go, this is what constitutes the offensive.

At the beginning, or even during the course of the campaign, one of the two adversaries may be conscious of temporary inferiority. Then he seeks to escape, to postpone or at any rate to minimise the decision, until the situation improves and enables him to take the offensive. It is very rare that an army makes war without any hope of ever regaining the advantage; non-offensive conduct should normally be considered as provisional.

During the course of the offensive it may be to our interest to postpone the decision in order to make it more complete, and again in order to postpone the decision it may be an advantage to give a hard push, to make a short-lived attack. Neither the offensive nor its opposite is always absolutely free from admixture. Two adversaries may think at the same time that they both have superiority, and both rush to battle; they may also both believe that it is to their interest to postpone the decision. The most striking example of this that we can give is the famous armistice of 1813.

The choice between the offensive attitude or the non-offensive attitude is, in principle, a question of strength, of superiority. It is obvious that we must not take material strength alone into consideration, but also the value of the troops and of the commander. Superiority may also be associated with local conditions, such as the geographical or military situation of the army. Thus in 1805 Napoleon judged himself to be in a condition to win if he stayed at

Brünn and Austerlitz; he could not risk going farther ahead.

Once a general is certain that he has superiority, he acts offensively, seeks as prompt and as radical a solution as possible, and demands of the art of war the means to accomplish his ends. For him who, on the other hand, feels himself for the time being the weaker, "the art of war consists in gaining time."[1]

Man, in perfecting his weapons, seeks to ward off danger; he tends to prolong the preliminaries of action, and in the elementary combat procures ever-increasing resources for the defence. Now, by a singular contradiction, he thus finds himself favouring the attack.

The more the perfecting of weapons prolongs the frontal fight and allows of an economy of troops necessary to resistance, the more time and resources are available for turning movements and the principal attack. Progress in firearms invariably favours the offensive. As we follow out the working of this law through the centuries, we see the offensive disposing of ever-growing resources for imposing the decisive encounter on the adversary.

Two or three centuries ago the smallest obstacle enabled us to check the offensive; to-day the offensive finds no barriers to retard its movements. The sudden change in this respect occurred during the second half of the eighteenth century as a consequence of tactical progress due to the musket.

[1] Napoleon to Joubert, February 17, 1797.

§ 2. WAR IN ANCIENT TIMES

When Cæsar attacks the lieutenants of Pompey in Spain, a march of 360 kilometres in ten days shows in what a hurry he was to come up with his adversaries; but, once in their presence, he is not master and cannot force battle on them. The two armies are in contact for a month: Cæsar offers battle in vain; and a surprise attack on Lerida does not decide Afranius to issue forth from his camp. Cæsar tries to get at him by famine, and goes so far as to divert the course of the Segre. A second month runs by and the only result obtained is to make the enemy decamp. Cæsar harries him for a day; and at last succeeds in blocking him between the Ebro and the Segre. This time it is possible to finish with him, but it is July 2, and contact had been obtained on April 20.

We know how many counter-marches Cæsar and Pompey made, how much time they spent facing one another and observing one another before meeting at Pharsalia. Such tergiversations were normal in the wars of former days.

It is the same in the Middle Ages and in the sixteenth and seventeenth centuries. We often do not know this, because we have only studied the wars of those far-off days in general histories; but as soon as we go ever so slightly into detail we find everywhere the same *delays from the moment in which contact is obtained*, if the two adversaries do not both believe themselves certain to win.

We know the marches and counter-marches of Turenne and Montecuculi on the Rhine, and

Turenne is usually supposed to have been in his own way methodical. As an example, let us examine one of Condé's campaigns. We cannot tax him any more than we could tax Cæsar with either slowness or timidity. His contemporaries like contrasting his boldness with the formalism of Turenne. He was the keenest cavalry leader known; no one knew as he did how to give a lead to the squadrons. In 1643 he received command of the newly recruited army which was not even assembled. Does he think of attempting some siege, some secondary operation? Will he temporise? No; he desires battle and flies to it. It was his luck to meet an adversary no less confident of victory than himself, one who had never known defeat; the encounter immediately takes place at Rocroi. And in 1645, when rushing to the assistance of Turenne in Germany, he has the same good fortune. His reputation is made and it inspires some circumspection. "He had resolved to open the Munich and Vienna road to his army by defeating General Mercy, and so force the Emperor and the Elector of Bavaria to conclude peace. Acting on this fine plan he advances on General Mercy." But it was a long distance betwixt cup and lip. When he reaches the banks of the Necker Condé finds the enemy posted there, and is unable to cross the river by force. He has to make a long détour. A month goes by; the French have been unable to get out of Franconia, or to lay hands on their adversaries. As for Condé, "although he had conquered a province, this success did not come up to his ideal—*he aspired to a decisive victory*; he

advances on Comte de Mercy, who was more than 20 leagues away." Mercy steals away again, and in despair Condé is about to besiege Dinkelsbühl, when he hears that the enemy has taken up a position. "Immediately for his resolve to besiege (this town) he substitutes a march on the enemy, which is carried out that very night." These are the experiences he has to go through to arrive at the battle of Nordlingen. In the same space of time we shall find Napoleon going from Boulogne to Ulm and Austerlitz.

Frederick II. breathes nothing but the offensive —the offensive always, in every situation, in the operations as a whole as on the field of battle, even if he is in presence of a superior army. He is activity itself—goes constantly from Bohemia into Silesia, from Silesia into Thuringia, facing all his enemies in turn; and these great movements from one province to another are carried out at the average rate of 20 kilometres a day, and this rate is kept up for two, three, or four weeks. With so much keenness and ardour, how does he operate when he has gained contact with his adversary? In 1757, for the first time, he moves by long marches from Silesia to Thuringia, but, having arrived at Erfurt, he sees the enemy disappearing towards Eisenach, and he does not take the risk of pursuing him, which might be an interminable task. He prefers to send half his army into Brandenburg, 200 kilometres away, to face another adversary, and after several days' delay he decides to follow it. Always maintaining the same rate of 20 kilometres a day, he returns

rapidly and finds himself once more opposite Hildburghausen and Soubise, who seem more disposed to accept battle. The six following days, from October 31 to November 5, are passed in marches and counter-marches between Weissenfels and Meusebourg in a space of 3 leagues in length. Each of the adversaries watches for a favourable opportunity as he wishes to impose and not to receive battle. It all ends in the affair of Rossbach; the more cunning and the quicker of the two antagonists surprises the other *en flagrant délit* of manœuvre.

§ 3. CAUSES OF THE TRANSFORMATIONS IN WAR

And so, from the highest antiquity till the time of Frederick II., operations present the same character; not only Fabius or Turenne, but also Cæsar, Condé, and Frederick, lead their armies in the same way. Far from the enemy they force the pace, but as soon as they draw near they move hither and thither in every direction, take days, weeks, months in deciding to accept or to force battle. Whether the armies are made up of hoplites or legionaries, of pikemen or musketeers, they move as one whole and deploy very slowly. They cannot hurl themselves upon the enemy as soon as they perceive him, because while they are making ready for battle he disappears in another direction.

In order to change this state of affairs we must somehow or another be able to put into the fight big divisions, each deploying on its own account, leaving gaps and irregularities along the front.

This, as we have seen, is what happened in the eighteenth century.

Up to the time of Frederick II. armies remained indivisible during operations: they are like mathematical points on the huge theatres of operations in Central Europe. It is not possible to grasp, to squeeze, or even to push back on some obstacle an adversary who refuses battle, and retires laterally as well as backwards. There is no end to the pursuit. It is the war of Cæsar, as it was that of Condé, Turenne, Montecuculi, Villars, Eugène, Maurice de Saxe, and Frederick. It is the sort of war that all more or less regular armies have made from the remotest antiquity down to the middle of the eighteenth century.

Battle only takes place by mutual consent, when both adversaries, as at Rocroi, are equally sure of victory, and throw themselves at one another in open country as if for a duel; or when one of them, as at Laufeld, cannot retreat without abandoning the struggle; or when one is surprised, as at Rossbach.

And certainly to-day, as heretofore, a general may refuse battle; but he cannot prolong his retreat for long—it is the only means he has of escaping the grip of the enemy—if the depth of the theatre of operations is limited. On the other hand, an army formerly could retire laterally, and disappear for months by perpetually running to and fro, always taking cover behind every obstacle in order to avoid attack.

For the last half-century certain military writers have tried to see in the slowness of this

sort of war the effect of a political system. They say that the sovereigns of those days paid their soldiers, and were afraid of getting them killed. They made limited war in order to conquer a fortress or a province, and ignored great war—national war, in which victory is a question of life or death to a state. From this profound difference in the object of operations there resulted, according to them, a no less great difference in the manner of conducting the operations, and they conclude that if the wars of the eighteenth century were slow, and those of Napoleon startlingly rapid, it was so because in the former they had second-rate ends, "geographical objectives," and in the latter ardent passions born of revolutionary enthusiasm.

An absurd thesis if ever there were one! It would have been sufficient for these authors "to inquire," to learn that this sort of war was not peculiar to the seventeenth and eighteenth centuries; that it had been practised as long as there had been armies; that the generals of antiquity acted in no other way than those of Louis XIV., and that, moreover, they commanded *unpaid citizen soldiers* in the name of the Greek Republics, of Rome, and of Carthage; that Cæsar operated against Pompey or Afranius, as Turenne did against Montecuculi, and that, moreover, he was staking both his own life and the Empire of the world. They would have known also that the armies of Turenne, Frederick, and Maurice de Saxe were half composed of militiamen recruited by lot.

But without going back beyond the eighteenth

century, have not they fallen into the absurdity of mixing up the Empress Maria Theresa with the Grand Duchess of Gerolstein? How can they believe that that energetic princess, or Frederick II., William of Orange, and Louis XIV. would by choice practise a sort of watered-down war; that they would go to the enormous expense of raising and arming troops to get nothing out of it, and that if they had known a way of crushing their enemy more promptly they would have hesitated to have recourse to it? Remember that it would have been enough for one of the sovereigns of those days to betray the tacit pact attributed to them to achieve more power and glory in six months than Napoleon did in ten years.

There was a simple way of avoiding so many mistakes, and that was to go and spend a few hours among the public archives, or even to read a few pages of the political correspondence of Richelieu or of Frederick II., when the sentiments that animated the rulers of those days would have been seen, as well as the motives that inspired the conduct of their generals. And it would also have been seen that governments, far from inculcating generals with dilatoriness, were perpetually reproaching them for it.

What we are concerned to establish is that the methods of war have not been determined by its general character, but that it is the methods which have at all times given its character to war.

Neither the handling of weapons nor the science of marches derives from the general character of the operations; on the contrary, weapons determine

the manner of fighting and the evolutions; from this result the general structure of the battle, the form of the manœuvres that prepare it, and finally the general character of the operations—the physiognomy of the entire war.

With primitive weapons war is relatively slow; the more weapons are perfected, the more promptly and easily does it become decisive, because the assailant must of necessity dispose of more powerful means in order to impose battle on the defender.

§ 4. THE ELEMENTS OF ANCIENT WAR

These means were not possessed by any general of antiquity or of the seventeenth century. On an ordinary theatre of operations it was already almost impossible (we have seen it in the example of Condé in Franconia) to come up with one's adversary if he were slipping away. But it was quite another thing in a prepared theatre of operations like the Flanders of Vauban, furrowed by a network of rivers and canals, with fortresses at all the junctions. What could be done then? There was nothing to be gained by pursuing the enemy without pause; after ten years of it one would have got no farther. A skilful general, while keeping the enemy under observation, would proceed to what may be called "works of approach"; the country is quartered by canals—he will seize each square successively, besieging and taking the fortresses that enclose it; he will possess himself of the essential points of the country, of the bridges and the defiles, and where this is impossible he

will carry off the corn and forage. He will thus restrict his adversaries little by little into a closed area, where at last they will be obliged to accept battle.

Can we any longer be surprised at the importance acquired during operations by secondary objectives, the war of sieges, convoys, supplies? Can we be surprised if habits of slowness and slackness become the rule? Can we imagine what in the hands of a Villeroi or a Soubise becomes of an instrument which was already so heavy in the hands of Frederick?

The tyranny of the administrative services has been spoken of. The magazines and convoys are supposed to have retarded the operations. It is certain that formerly the subsistence of troops demanded much more care than it does to-day, precisely because of the long halts made by armies in the same region, which prevented them from living on the country. But never did a general of any value at all allow himself to be guided by the consideration of his magazines; never was any system of war based upon them. In order to compare ancient and modern war we must not represent the one by Soubise, the other by Napoleon.

In the wars of former days revictualling was carried out in the most diverse ways: Cæsar's legionary carried corn for seventeen days, and the legions were followed by a convoy which carried thirty days' supplies, and was renewed by purchase or requisition. Sometimes the corn came by land or by water from the base; sometimes it was seized on the spot. During the Thirty Years' War the

Swedish troops used all means of supply—local purchase, movable magazines, stationary magazines, and even requisitioning from the inhabitants.

During the campaign of Louis XIV. in Flanders, where the war of sieges becomes of preponderating importance, it is necessary to subsist on stationary magazines. It is the same during the War of the Austrian Succession; it is the theatre of operations that imposes the method. Moreover, the magazines are filled by purchases or requisitions made in the country.

If subsistence plays such an important rôle in armies during the Seven Years' War, it is because the service of supplies is directed by a man of great ability, Pâris-Duverney, while the generals are nothing but puppets. It is a question of men, not a question of systems.

Frederick II. at the same time used stationary magazines prepared in great numbers in fortified places, and mobile supply columns. This double organisation gave him complete liberty of action.

To sum up, the ways of revictualling an army have continually varied, and the method of war has remained the same; a war is always slow in which we know that the battle will be decisive and is so important as to be only accepted voluntarily; a war in which the weaker can avoid battle indefinitely, and where the stronger is obliged to content himself with only partial successes and small advantages while waiting the opportunity of pushing the enemy back on to some insurmountable obstacle.

The rôle played by natural obstacles is

considerable in ancient war ; in antiquity, as we see by the examples of Cæsar, a marshy depression was enough to put a body of troops out of reach. When firearms acquired a greater range, and above all a more rapid rate of fire, obstacles have to be of a more serious nature. In the eighteenth century the musket and the gun rob all obstacles of their value from this point of view, except escarpments, and above all rivers. In our own days great watercourses alone offer shelter from attack. The progress in weapons in this, as in other things, is always favourable to the offensive.

Fortresses also are of capital importance in wars of former days. Weapons are not powerful enough to admit of local levies clinging to localities, and holding a defile or a bridge for long. There is no other way than that of establishing a fortified post. Hence, right up to the wars of the seventeenth century, the great number of forts, of isolated towers (the *castella* of antiquity), of little places and of castles. The most superficial examination of the campaigns of Turenne show the rôle played by these little fortresses. Windmills and fortified houses are beginning to replace them. It was by holding these essential points with weak detachments that the armies of former days extended their action over the whole breadth of the zone of operations, as armies do in modern war by dividing themselves up and separating their divisions. What we to day call the principle of *the economy of forces* was not invoked in former days, and Frederick II., like his predecessors, confined himself to the advice "to make as few

detachments as possible." This was the primitive form of this primordial principle, no less true in former times than to-day, but which would then have had no meaning in the form in which it has since been clothed.

Strong fortresses, we repeat, were of great importance in ancient war. In mountainous or undulating country, such as the Alps, Jura, Vosges, and Ardennes, they hold all the defiles and all the cross-roads in the valleys ; in the plains, as those of Flanders, they hold the junctions of rivers and the crossing points of canals. Thus in a mountainous or wooded country it is not possible to follow any natural path without knocking up against a fortress ; in flat country it is not possible to cross any obstacles without holding the fortresses. In order that the assailant may oblige the defender to receive battle he must advance methodically, and conquer territory in sections one after another by possessing himself of the fortresses that command their boundaries. And so each campaign has for its object the conquest of a fortress or a shred of territory. Sufficient unto the day is each day's labour. At the same time that fortresses serve to bar the principal roads of communication they are also employed to enclose magazines. Armies which move as one whole and often, under active generals like Turenne and Frederick, move from one province to another, need to keep sheltered in these fortresses supplies of all sorts, and even the *matériel* which they use for operations in the neighbourhood.

Then, as to-day, revictualling by convoys is

impossible at more than five marches from the magazines; it is necessary then, if an army wishes to manœuvre, that it should find a fully supplied fortified dépôt less than 100 kilometres away. This essential detail of ancient war will appear again transformed in Napoleonic war. In all ages vigorous pursuits have been rare, and above all it has never happened that the pursuit has been undertaken the same day as the fight. However, we find in the seventeenth century that astonishing pursuit which turned the doubtful victory of Wittstock (1636) into a marvellous triumph. In spite of this isolated example, pursuits are extremely rare.

It is feared in fact that troops will become disordered by pursuit, and that the enemy, rallying in part, may transform victory into disaster. It is also expected that a pursuit stopped by nightfall cannot be resumed the following day if the enemy has re-formed himself behind the smallest obstacle. When the pursuit takes place, it is in a single direction, by a disciplined and but little mobile army, and the vanquished quickly escapes from destruction. He is not outflanked or enveloped as he would be by the pursuits *en battue* of the Napoleonic age. Also, armies do not trouble themselves much about having their principal line of retreat behind them, and often fight with their backs to the enemy's country. If we pass in review the twenty-three battles of Frederick we shall find that one in four was fought in this abnormal situation, without the combatants concerning themselves about the dangers they may

run or that they may make their enemy incur. The battle of Zorndorf is quite astonishing because of the *sans-gêne* with which the two enemies pivot around each other. The result was that the generals, Frederick as well as the others, chose the wing on which the principal attack was to be made for purely local reasons, with no thought for the operations as a whole. In order to understand Valmy, when two generals of the old school met —the French with their backs to Berlin, the Prussians with their backs to Paris—we ought to know all those battles of Frederick II., so strange to our eyes. Valmy marks a new political era, but from the military point of view it is the end of a world.

CHAPTER II

MODERN WAR

§ 1. THE ORIGINS OF MODERN WAR

While Frederick II. carried the methods of ancient war to the highest pitch of perfection, French generals were seeking for progress in tactical innovations. Being but mediocre in practice, they did not make their methods tell successfully in the Seven Years' War, but they prepared the materials which Napoleon was soon to put into use.

The first result achieved in 1760 by Maréchal de Broglie was that a column was able almost instantaneously to deploy on its head and that an army might march in several columns and promptly range itself in battle order as soon as its advanced guards had obtained contact with the enemy. This was immense progress emphasised by the fact that easily deployed columns may follow the roads and not tramp heavily across fields; and that armies preceded by sharpshooters and provided with artillery are neither stopped by woods nor by valleys. In this way all the formalism of ancient war began to melt away: it was no longer possible to refuse battle by defy-

ing the enemy from behind a brook. There was no other way of avoiding battle than by retiring straight backwards by the shortest road.

Beside this first step in progress others, depending also on the power of the new weapons, contributed in their turn to give a wider scope and greater rapidity to war.

In the seventeenth century armies could hardly occupy the theatre of operations except by means of little fortified posts; meanwhile Frederick had begun to detach strong advanced guards on those river barriers beyond which he wanted to anticipate the enemy. The resistance of these big detachments was intended to give him time to come up.

Berwick and Villars had made this procedure usual, the former placing three army corps in the three big valleys of the Alps, the latter also dividing his forces in three corps on a front of 9 leagues between the Scheldt and the Deule. Maurice de Saxe had organised permanent *divisions* to march on Liège and Maestricht. The *divisional* principle which was applied intermittently by him was finally adopted in 1759 by Maréchal de Broglie, and the divisions of the army were partitioned out over a wide extent. Each of them was capable of receiving the enemy's first blow without being crushed by it and gain time for the others to come up and to manœuvre.

Thus *the army itself covers its flanks and its communications without devoting to this purpose any permanent detachments.* Above all it threatens the flanks and rear of the enemy and

it limits the movements he is able to attempt. He either has to retreat by the shortest road or to accept that battle whose outflanking attack has already been prepared.

Guibert says: "If we are on the defensive, we must hold the issues or the points by which an enemy might encircle our flanks or advance on objects we cover. If we are on the offensive, we must hold the issues by which we can march on the enemy; we must threaten the points that interest him; finally, we must stretch out to enfold him."

The expansion of armies, thanks to the separation of the divisions, enables us continually to dislodge the enemy by a sort of drive, leaving him no alternative but that of battle or direct retreat.

"*It is necessary*," said Chevalier de Chastellux, "*that the enemy should not be able to get past the flanks of the army and march upon its rear without an encounter and consequently without being obliged to fight.*" It is impossible henceforward to tack about or to disappear to one side.

And if it has been possible to organise this drive in such a way as to press the adversary, not towards his own country, but in the inverse direction, he must be hopelessly lost. We can see the whole range of this theory.

It will cause those battles with reversed fronts which were so common in ancient war to disappear. Valmy will be the last of them. It will allow of forcing back and pursuing the enemy without intermission.

Soubise got safe and sound out of his ridiculous

defeat of Rossbach, one of the most complete he ever received. Brunswick, abandoning his attack on Valmy, found no obstacles when he wished to march round the French army and resume the road to Prussia, but after Jena the hunt goes on irresistibly and relentlessly, and leaves no way of escape. The Art of War is completely upset.

And from the beginning of operations armies extended in this way press the enemy and push him back into the snare. "*A skilful general*," said Bosroger, "*from afar brings about a battle by other operations which force an enemy to do what he wills and make him, so to speak, come right up to the battlefield which has been prepared for him.*"

These great results are obtained by dividing the army into several corps, partitioned out on a much larger front than that of the actual order of battle. It is an immense advantage in the hands of a skilful and active general. But the dangers increase with the advantages; the instrument becomes by so much the more difficult to wield, and, the more perfected it is, the more hazardous to use. The divisional principle leads slow and clumsy generals to the system of cordons; that is to say, to armies glued down into a disposition too extended and too much divided up for a combined action.

Do not let us make any mistake; *the cordon is not so much a matter of the distribution of the troops as of the intentions of the general.* Was there ever anything more scattered than Bonaparte's army on the Adige in 1796-7? And can

we say that they were *en cordon*, those troops which always found themselves concentrated on battlefields, at Castiglione, at Arcola, and at Rivoli ?

Given that an army is *en cordon*, that is to say, divided up with no idea of concentration, it may happen that a more active enemy will crush separately the various portions of the cordon; or, if he also remains *en cordon*, one will get a series of partial fights instead of one decisive battle, and this new system, which was to make war quicker and more energetic, makes it, on the contrary, slow and dragging.

This is what happened in 1758–62, in the campaigns in Hesse and Westphalia, where on both sides the generals were equally indifferent. It is just the same in the earlier campaigns of the Revolution; for instance, in 1793, on the Saar, where four French divisions are face to face with four Prussian divisions. Or again, be it in Flanders or in the Vosges, one of the adversaries at last decides to concentrate his forces on one point to break the enemy's cordon; only he takes so long concentrating that the enemy, put on his guard, follows his example. Thus a general action is arrived at, but without surprise or marked superiority on either side.

And so Guibert criticises " this fashion of never making war concentrated, of never operating with the whole army at a time, of never daring to fight great battles." He is tempted to adhere to the older methods, but reflection brings him back to the divisional system; only " the art," he tells us,

"will be to spread without getting to grips, to enclose without becoming disunited. . . . It is in this that the man of superior ability ventures more than the indifferent man, because, while he knows better the drawbacks of what he risks, he foresees, he plans, and he prepares both better safeguards and resources."

Mauvillon goes into the detail of these "safeguards":

"All these corps must be in positions where they can maintain themselves against superior force for long enough to give one time to come to their help. One must therefore estimate the distance, the nature of the roads, and the means which the enemy can collect together to fall upon such a corps; and those means which we have at our disposal to warn us of such a design before the moment of its execution, etc."

Bourcet says pretty much the same about it; he concludes that usually it is sound to limit oneself to a frontage of two marches, so as to be able to concentrate in one day. What neither Guibert, nor Bourcet, nor Mauvillon tells us, because there had been nothing to give them any idea of it, is the rapidity which must be infused into resolutions and marches to take advantage of these new methods. The troops will be continually in movement, whether they are concentrating for battle or separating after victory; and for the concentrations to take the enemy at a disadvantage we must make them suddenly, promptly, and secretly, and debouch unexpectedly with a whole army against one division.

On the subject of the subdivision of armies Guibert formulates an essential proposition: *no detachment should be permanent.*

Limitation of front is not enough to ensure concentration, and an army may be glued fast *en cordon* on a front of 4 leagues, if the intellectual inertia of its chief so condemns it, while another, by its mobility and its energy, will appear to be assembled, although extending over 12 or 15 leagues. In the former army every detachment is a permanency; in the latter even the most distant divisions will not cease to be integral parts of the main army, ever on the look-out for the order which will bring them to the battlefield. They have no permanent rôle which will keep them from marching to the sound of the guns.

"He who would retain the largest possible number of troops in hand will keep his army concentrated, and will send weak detachments to guard some post or magazine; allocated to definite tasks, these detachments will remain tied to them on the day of battle. On the other hand, the general who distributes his army on a fairly wide front can by this very fact cover his magazines and communications without allotting to them special detachments. Less concentrated on the eve of the decisive day, he is more so at the critical moment. To sum up, war has its unavoidable difficulties to which one must bend; the only way to guard against everything is to spread out reasonably, with full knowledge of the situation, and the definite idea that the various portions of the army are not entrusted

with special tasks, that they are but extended limbs which we shall suddenly close upon the enemy. *We must spread ourselves out so as not to make detachments.*"[1]

§ 2. THE DETAILS OF MODERN WAR

The important change introduced into the operations of war brings with it of necessity a crowd of transformations in the elements of war on the one hand, and, on the other, in its general physiognomy.

Formerly armies moved as one block halting to take up their order of battle. Their movements were in no sense the object of any science or any very complex art. A bundle of tracks for the columns was picked out across country, their marches were started for them, and their camps were traced out. It was altogether a routine task.

The great movements of armies were the province of *strategy*;[2] fighting and the dispositions for the fight formed the objects of *tactics*. Thus there were two clearly marked parts in the art of war. Neither of them, moreover, called for much science or *technical* skill; what a general needed before the engagement was plenty of cunning and promptness in forcing battle on his enemy and in avoiding having it forced on him; in the fight he required capacity to take in a situation quickly, determination, and the gift of getting men to charge.

[1] Colin, "L'Éducation militaire de Napoléon," p. 63.

[2] In those days it was called "*stratégique*."

In the new war the same qualities will certainly find scope for their employment, but in a more technical manner. The dispositions to be taken, whether at the halt, or to move army divisions scattered over 12 to 15 leagues, demand much planning and calculation; all that estimation of distances and appreciation of the length of time bodies of troops can offer resistance, of which Mauvillon and Bourcet have sketched the details, become the everyday task of a commander. For the march of an army it is necessary to regulate the movements of divisions and army corps in such a manner as to be ready in every possible circumstance. These evolutions are the subject of absolutely new studies, which, for Guibert and Napoleon and their contemporaries, constitute *grand tactics*. This new part of the art of war takes its place between strategy and tactics. It melts into the one and the other. Strategy, which deals with the general control of operations, also touches the distribution of forces and the combining of movements regulated so as to obtain a predetermined result. On the other hand, grand tactics concerns itself with the combined movements which prepare battle, and also organises the march of divisions up to the ground where they become engaged; the movement of the columns, when they take up the attack, is only a continuation of the approach marches.

Grand tactics is barely sketched out by the writers of the eighteenth century. It needs a man of genius to codify its principles, or at any

rate to give a sufficient number of perfect examples of it to build up the science.

Alongside of this essential factor many interesting details are transformed or come into being.

When an entire army changed position at one and the same time, it was by no means difficult for the enemy to know its place. From one end of Germany to the other a general could keep himself quite adequately informed; he had only to collect the common rumours. Having got near his enemy, he kept him under observation by a few patrols of hussars, supported or not, as the case might be, by dragoons able to fight on foot, or by companies of irregular light troops suited to carrying out a *coup de main* and to holding strong and well-placed buildings, such as mills, country houses, etc.

Once armies are divided up into divisions, and are continually either broadening their front or narrowing it down, it is much more difficult to keep their movements under observation. The cavalry is continually in the field now in small groups, troops, or squadrons, and again in force with horse artillery and even infantry support to pierce the screen of the hostile posts.

When operating on the offensive during the wars of the Revolution, whole cavalry divisions were placed with the advanced guard in order to discover the enemy's divisions; but it is above all by spying that intelligence is obtained.

Little by little traditions and rules are established for the use of cavalry in the work of exploration; but it is merely as regards the minor

operations, the leading of a contact troop: it will be for Napoleon to organise the use of cavalry on a large scale.

Outposts also developed in a rapid and remarkable manner. Formerly they consisted of a few companies posted some 200 paces from the camps. Afterwards cordons were formed covering all the army's positions. In 1793 Brunswick established his outposts on a frontage of 42 kilometres from Deux-Ponts to the eastern slopes of the Vosges, where they joined up with the Austrian posts. Facing them, the French Army of the Moselle formed a similar screen. It was hoped thus to offer an impenetrable veil to the enemy's reconnoitring; but in a few years' time it is recognised that the solution of the problem is much less simple than had been believed, and demands as much art as does the new method of exploration. Napoleon will be the first to show how, in extremely diverse circumstances, one should cover armies and ensure the secrecy of movements.

Between the operations of the armies of former days, marching in one single mass, following one single route, and those of modern armies, parcelled out in divisions, in which it is necessary to combine the movements of the columns, the difference is the same as that between a song following one single line of melody and an orchestrated work wherein the various parts are combined to produce a collective impression. No doubt it requires exceptional genius to produce work worthy of admiration on the one system as on the other;

but the more complex modern work requires inspiration of a more scientific character.

To be performed it also required a conductor. The operations of modern war demand a Chief of the Staff. Of course, in the seventeenth century a general had at his side a *maréchal général des logis*, a *major-général de l'infanterie*, a *maréchal général des logis de la cavalerie*, but their duties were extremely simple; it was merely a question of regulating the tracks of columns across country, and of ranging the troops in order of battle or getting the camps marked out. These duties have now become exceedingly complex, since it is necessary to ensure co-ordination in the movements of several divisions, maintain connection between them, obtain reports from them in time to be of use, etc. Thiébault's big book shows how in a few years the Staff formed itself. Napoleon will find it already organised and working admirably, *and not seeking to go beyond its proper functions.*

The administrative services will be deeply modified by the new system of war. When the army remained concentrated, and oscillated for a long time around the same position in an exceedingly restricted zone, it was necessary to pour into one single distributing centre, or magazine, supplies bought or requisitioned in an extended region. Of course, it was necessary to live on the country, for there is no other means of getting food.

Now that armies are distributed in divisions the commissariat has to multiply supply centres—this

causes a slight complication; but on the other hand the *commissaire des guerres* attached to each division has only got a restricted zone to exploit, which makes his task easier.

The provisions requisitioned are handed over directly to the troops, which makes it more apparent to the historians that they are living on the country.

As a matter of fact this new organisation of the service, attempted during the later campaigns of the Seven Years' War, does not reappear at once in the Wars of the Revolution. In 1792-3 the armies are immobilised on the frontiers; when the service works in a regular manner, the troops live on magazines in the interior of the country; when it does not work, they pillage. It is again this latter method which is more usually applied from 1794 onward, when pushing forward. The *commissaires des guerres* take a great deal of trouble to provide the soldier with his daily bread by regular channels, and very often they succeed in doing so; but whatever we may do, *living on the country* must usually be translated by *marauding* and also by *dying of hunger*.

We are wont to say that generals are continually under the influence of the administrative services, and that their method of war is imposed by the conditions of supply of their armies.

It is thus admitted that, in modern wars, the dividing up of armies, what we call the divisional principle, has no other *raison d'être* than to facilitate subsistence. One must, it is said, divide to live, and collect together to fight. This is a mistake which we should avoid by studying in history

the period during which armies began to subdivide *in order to manœuvre;* the attempt was then made to adapt the method of supply from magazines to the new system of war. It is by degrees that in the end it was abandoned in favour of living on the country, that is to say, distributing food requisitioned direct to the troops instead of collecting it into magazines in the first instance.

In default of historical researches we might satisfy ourselves by pondering over known events: was it to facilitate supply that Napoleon in 1806 directed Davout and Bernadotte on Naumberg, Lannes and Augereau on Jena; that in 1809 he moved Masséna on Landshut while Davout was fighting in front of Abensberg?

It is essential to state the fact: military considerations connected with fighting determine the broad outlines of every system of war; the method of supply adapts itself to those considerations and does not govern them.

§ 3. THE CHARACTER OF MODERN WAR

The operations of former days, with the impossibility which generals found of imposing battle on the enemy, the long periods of waiting, the sieges, the winter cantonments, imbued all generals and soldiers alike with habits of slowness and circumspection which perforce exerted an influence on the character of war. And besides, the impossibility of obtaining a definite solution to a campaign accustomed men to the pursuit of secondary objects, to set themselves objectives which were far

removed, both by their nature and their importance, from the aim which one should always have in view, *i.e.* the ruin of the enemies' armies.

The new war will upset all this, for it will be war composed entirely of movements; the troops will be incessantly on the march; combats will be frequent. The commanders and also the soldiers will become active and enterprising both intellectually and physically.

It will be possible to impose battle rapidly by means of a skilful and vigorous offensive, to conduct operations in a lively way, to disdain secondary objectives, or what modern criticism calls "geographical objectives."

Guibert foresaw in great measure the consequence of the new tactics: "A well-constituted and well-commanded army ought never to find itself before a position that stops it. . . . Any general who shakes off old-established prejudices on this count will embarrass his enemy, astound him, allow him no place in which to breathe, and force him to fight, or else to fall back continuously before him. I dare to imagine that there is a way of leading an army which is more advantageous, more decisive, more calculated to procure great success, than that which we have up till now employed."

And the artilleryman Du Teil adds "that the fate of fortified places will almost always depend on that of battles; *they are but accessories.*"

In former times sieges were undertaken in default of being able to deliver battle. Soon Napoleon will say, on the contrary: "No sort

of siege must be thought of before a battle has taken place."

Nobody indeed ever mistook the final aim of war, but we are only now beginning to be able to grasp it and to attain it in a direct manner.

Unhappily for France this new war demands a science of strategy, a greater *professionalism* in the higher parts of war than was needed for ancient war, and the French monarchy concerned itself but little with the training of officers or with preparing them for the higher commands.

Also, when it was necessary to oppose the coalition in 1792, only one gifted but ill-educated man was to be found—Dumouriez—to sustain for a while the honour of our arms, and after his disappearance there was no one who was fit to command an army. And moreover there was no more talent to be found among the *emigré* generals than among the patriots. Soon, and in spite of the want of skilled generals at the head of the armies, a member of the Committee of Public Safety showed himself capable of imparting a new energy to the operations. He was an engineer officer, Carnot, endowed with vast intelligence, an ardent will, and like Bonaparte he had received a certain military training. He has in him an instinct for the new war. He desires battle, and prompt and decisive solutions, by the same means that had been extolled by Guibert, Chastellux, and Boisroger. On the 21st Ventose, year II., he orders Pichegru to prepare a decisive battle: "The Committee recommend you to prepare in silence this event which should decide the fate of the

campaign. The sooner it can be delivered, the better, in order to forestall the assembly of the enemy's forces and such assistance as he may expect. The place you must choose for the battle is between the Lys and the Scheldt, so as to push the enemy back into the funnel formed by these two rivers, so that if he is routed he will have no means of escaping.

"The intention of the Committee is that you should leave to the enemy no time to breathe. We want to finish it this year; we must have the most offensive and the most vigorous of wars; not to advance rapidly, not to have crushed the last of our enemies between now and three months hence is to lose all. I repeat to you, in the name of the Committee and of the country, we must make an end of it."

On the 5th Messidor, year IV., he writes to Jourdan: "The enemy must be pursued without giving him any breathing time and without amusing oneself looking for positions. Beware, my dear general, of assuming a defensive attitude. The courage of your own troops will weaken, and the boldness of the enemy will become extreme. It is necessary, I repeat to you, to fight a great battle, to fight it on the right bank of the Rhine, to fight it as near as possible to Dusseldorf, to fight it, finally, with all your strength, with your usual impetuosity, and to pursue the enemy without respite until he is entirely dispersed."

The 1st Brumaire, year II., the instructions to the Commander-in-chief of the Army of the North were conceived thus: "The Commander-in-chief

of the Army of the North and the Ardennes will assemble all the troops at his disposal in order to strike a decisive blow, and drive the enemy in this campaign completely from the territory of the Republic. . . . He will surround the enemy, envelop him, and enclose him in that portion of the country which he has invaded, will cut his communications with his own country, and will separate him from his magazines, which are to be burnt if they cannot be seized."

We feel the spirit of the new war in all these orders—the spirit that should animate generals now that the divisional principle allows of widely extended operations, which force the enemy to battle and precipitate the decision.

Carnot, as a disciple of Guibert, incessantly recommends the assembly of forces and mass action as indispensable to decisive success. One constantly finds in his orders, such expressions as "with all your forces," "assemble all one's forces," "carefully avoid the dissemination of your forces," etc.[1]

But this is the intention, the desire; in application Carnot is the first to order division, subdivision, dissemination. In the order of the 21st Ventose to Pichegru, he prescribes that a part of the army shall attack between the Lys and the Scheldt, while the other is to penetrate between the Sambre and Meuse, and a third part march upon Liège, without mentioning posts to be held between Bouchain and Maubeuge.

[1] All that precedes this is based on Captain Dervieu, "La Conception de la Victoire chez les grands Généraux."

On the 11th Pluviose, year II., he orders the armies of the Rhine and the Moselle to act in unison, but he does not place them under one command.

On the 1st Brumaire, year II., while he orders Pichegru to assume a most energetic offensive, he advises him to hug the frontier and not to go far from fortified places.

In 1796 a general appears who is capable of realising this vigorous offensive, this much extolled mass action, and hardly has he won the victories of Montenotte, Millesimo, and Mondovi, than the Directorate wants to divide his command and leave him but half his forces!

Be it in 1795 and 1796, or in 1793 and 1794, the armies are divided up and act without cohesion, and generals fail to understand Carnot's best plans. In 1793 our divisions are scattered from Strasburg to Dunkirk. Carnot orders partial concentrations in order to save Landau and Maubeuge; he is misunderstood by Hoche and Jourdan, and is obliged to come and direct operations on the spot in order to assemble superior forces at Wattignies and Fleurus. In 1796 the armies of the Sambre and Meuse, on the one hand, and of the Rhine and Moselle on the other, not only had difficult lines of operations, but scattered their divisions and never had more than two in *general* engagements. This is the summary of the conduct of operations during the long wars of the Revolution; they are poor, as we see, in rational combinations and in vigorous movements. Although the troops soon became service-

able, the generals who sprang from the earth were more of the style of Soubise and Contades than of Villars and Berwick. As Rustow says,[1] "the result was that the new system of war showed at first nothing but its disadvantages." The chief innovation, the divisional principle, stimulated the energy and spontaneity of the French Army; but as a result of this very spontaneity, we see everywhere, carried to an extreme, that dangerous dispersal which the independence of divisions brings about. Generals are not yet infused by the thought of Carnot: "Direct those independent fractions on a single point."

"We shall see things gradually modifying, thanks to the genius of a single man, General Napoleon Bonaparte. He shows that it is possible to employ all the available energy of divisions and to make this multiple action contribute to a single end."

Napoleon lays down the principles and shows us the models of modern war; in the war to come we shall assuredly have new weapons, larger masses, more efficient means of transport; it will not be possible to apply the procedure of Napoleonic war without modifications; some principles even may have fallen into disuse. Nevertheless, for him who knows better than to copy forms slavishly, it will still be in Napoleonic war that he will find the models that should inspire, the subjects that should be meditated, and the ideas that should be applied in the twentieth century. There are operations more recent than Napoleon's, but they

[1] "L'Art militaire au XIX Siècle," vol. i. p. 110.

were executed under conditions very remote from those in which we shall find ourselves in a future European war. The more modern points they comprise do not permit us to imitate them more directly than we do those of Napoleon, and cannot be put in the balance against the perfection of his operations. Therefore we shall dwell at length upon the principles and the procedure of Napoleonic war.

CHAPTER III

NAPOLEONIC WAR

§ 1. THE PRINCIPLES OF NAPOLEONIC WAR: FORCE: UNITY OF ACTION

When Napoleon entered the Royal Corps of Artillery, and later when he assisted in 1792 and 1793 in the events of the first Revolutionary campaigns, he finds the ideas and the practice of soldiers singularly disorganised. Up to the middle of the century there had been a well-defined doctrine and method of procedure consecrated by long experience. It had since been recognised that these no longer corresponded to the resources of the day; men began to do without them, though they had nothing solid or established with which to replace them. In the last campaigns of the Seven Years' War, as in 1792 and 1793, there was nothing but an illogical medley of antique errors and new theories. Napoleon brings to a point the methods sketched out in France before 1789; he regulates their use according to those higher principles which he determines by pondering on the wars of the past and the then most recent literature on the subject.

In Napoleonic war we find various factors which amalgamate to form a complete system:

(1) The *methods* in use in French armies towards the close of the eighteenth century, the subdivision into *divisions* distributed over a great extent of country.

(2) *The fundamental idea of all manœuvre*, that we must *take the enemy in flank or in rear*, and attack or menace his line of retreat as much as possible.

(3) The *principles* which, though true in all times, have become more particularly necessary since the tendency to dispersal has developed: on a theatre of operations it is necessary to have but one commander-in-chief, *one single army* acting with *all its forces assembled*—that is to say, in a fit state to be concentrated for the battle.

(4) The *qualities of execution*, without which neither principle nor procedure is worth anything: *rapidity*, *energy*, *resolution*, and—directing the whole—that colossal intelligence which has perhaps never been surpassed.

To summarise: Bonaparte found the ancient system of war, with its permanent concentrations, its unity of action, but also its slowness, its innocuousness, face to face with the new system of war, which allowed of the operations being vigorously pushed forward, which risked leading, and indeed already had led, to dissemination. He takes from each what is good in it, combining the practice of divisional distribution with the principle of unity, and out of it he forms a complete system.

In the offensive, operations have for their object to hasten on battle, to win it, and to make it as decisive as possible. The principles and methods which Napoleon applies to operations are partly derived from those which he adopted for battle.

The first of all these principles is so simple that it makes us smile, and quite wrongly so, for we continually lose sight of it in application and in teaching; it is this, that *victory is above all a matter of strength*; that *to win, we can never be too strong*, that as many men must be enrolled as possible; that *for the battle itself as many troops must be concentrated as possible*, none must be neglected; "*victory is to the big battalions.*"

"This general principle once laid down and clearly admitted,[1] we shall at first notice the character of extreme simplicity which it brings into all the calculations of war, because one has made everything certain so soon as one has put oneself in the position of assembling forces equal to those of the enemy. . . .

"This simple and clear notion of numbers alone enables one to resolve, with the requisite neatness and precision, the principal problems that present themselves in war. It should serve as a point of departure for their examination, and it is only because agreement on it has not been arrived at sooner that so many false systems, so many refinements, and subtleties have been

[1] L. "Principes généraux des Plans de Campagne," Paris 1895, pp. 93–8.

engendered, in which the number of troops facing each other was the only thing of which men did not think. All those things melt away as soon as one reflects that there is nothing in war but *forces* brought into play, and that consequently everything which is not an active force cannot be accorded any sort of consideration . . . or perhaps one may forge for oneself chimerical fears out of vague words, such as 'the enemy is to be feared,' 'the enemy threatens us in such a direction,' words which have no meaning when they are used in an absolute manner, because the enemy is only to be feared if he is stronger than us. On the other hand, without taking any account of the relative strength of the armies facing each other, one may perhaps place vain confidence in purely metaphysical ideas, in useless and even dangerous complications, and in all those accumulations of subtlety which are worthy of scholasticism, and lumber up so many treatises on the military art. If we could believe them, these theories would substitute diplomacy for energy and resolution in war, and would replace common sense by quibbling, and end by transforming the terrible game of forces into a paltry play of wit. Instead of all this, once one has accepted the simple proposition, that with equal numbers the chances are equal, one will at once deduce that there can be no fear in war save that of seeing numerical superiority with the enemy, and no more certain advantage than to give oneself this superiority. In the case of inferiority Napoleon knew how to exhibit the greatest prudence, and in

the other cases it was the superiority of his own forces he relied on, and it was this that gave him absolute confidence as to the issue of the fight.

"In contrast to the far-fetched and complicated solutions and the subtlety of so many theoretical treatises, the Emperor's plans are only distinguished by the greatest simplicity, because in order to resolve all problems and ward off all dangers he gives no other advice than that to make oneself strong enough to be superior in numbers in the given situation and at the given point."

This first principle dominates all the others, and, when it finds itself in conflict with them, annihilates them. It is in vain that Napoleon, perhaps for his own satisfaction as much as to edify posterity, tries to demonstrate that he always conforms to the rules of prudence; for him the first of all rules is to be the strongest, taking into account the value and number of the troops, and the qualities of the general. Superiority once acquired, he allows himself to be guided by the consciousness of his own strength to reap the greatest advantage from it.

When, for example, he awaits the Allies at Austerlitz, exposing his communications with Vienna and Krems, and having no possible retreat across Bohemia, he does not doubt of victory.

When he marches on Jena and slips between the Prussian army and the Austrian frontier, any defeat would throw him across the frontier of this hostile Power. In the case of a reverse his army would be lost. This will not be so, because it

is fated to win, and there is no other good reason.

The essential thing is to be the stronger, and one can never be too strong. While relying on his genius, Napoleon neglected nothing that ensured to him material strength; in other words, the largest possible number of men.

He leaves behind no body of troops capable of serving in the field; that is to say, armed, equipped, officered, and composed of men who are physically fit, even though they have no military training.

He hardly ever has a detachment in the open field; the country, like the *matériel* and the hospitals, is held by a small number of fortresses, and the garrisons of these are supplied by the *dépôts* and the hospitals. As soon as the *dépôts* assembled in a garrison are strong enough to form a detachment of 100 men he sends them on to the army. No one remains in the fortresses save workmen, invalids, convalescents, and national guards.

Amongst the fortresses occupied there is one which deserves special mention; it is that which contains for the time being the supplies and hospitals of the army; Napoleon called it *dépôt, pivot*, or *centre of operations*.

Not only must we employ as many troops as possible in active operations, but also make of them *a single army*. If we have 100,000 men available and make two armies of them, on pretence of covering the frontier better, an army of the enemy of 60,000 men would undoubtedly

suffice to beat our 100,000 men in two battles. Let us form but one army of 100,000 men, and not only shall we beat the enemy's army of 60,000 men, but we shall even be able to beat 190,000 enemies if they have made the mistake of dividing themselves into two armies. We must look to the end: two armies of 50,000 men each will cover the whole territory from incursions by parties of the enemy, but they would be beaten by the main body of the enemy's troops, and with them the national cause would in the last resort be lost. A single army of 100,000 would leave the frontier provisionally exposed over part of its length, but once the decisive victory has been won, it will be master of the situation.

We must continually repeat to ourselves and always come back to it: *Nothing in war is of any importance save battle.* All the incidents, the incursions, the partial successes, are devoid of interest except in so far as they contribute to success in battle, for he who is victor in battle will be master of the situation, and will at one stroke wipe out all the little advantages acquired by his adversary.

"Unity of command is the most important thing in war. Two armies should never be placed on the same theatre of operations" (Napoleon).

Here we meet with a truth which, in its general and theoretical form, seems but too evident. As soon, however, as we pass to application, it is not understood by any one who has not meditated on it for a long time. In particular, sovereigns, legislative assemblies, and authorities capable of influencing the conduct of the war are apt to

misunderstand this fundamental truth, and it is from this that the gravest military faults arise, reverses even, and the most complete disasters. It needs a great deal of reflection on the part of a sovereign, or by the members of a government, to realise that the security of the national territory does not exact from them the occupation of every point on the frontier; that it is far better assured by the *assembly of all the forces available in one single army under one single command* on the same theatre of operations.

The first thought of an ignorant or weak government, whether it be monarchical or republican, is to spread out its forces indefinitely so as to cover all parts of the frontier.

Austria and France acted thus in 1792. If one rises from this first conception (*territorial* defence) to the stronger and wider conception of *active defence*, there is still a step to be surmounted, and it is one which neither the Government of Louis XV. nor the Committee of Public Safety, nor the Second Empire (to speak of France only) could attain; it is to renounce the employment of independent armies on a single theatre of operations.

Napoleon I., on the contrary, is extremely precise on this point: there should only be one army on one theatre of operations, one single commander-in-chief using all the troops for a single end, making them co-operate in the defeat of the enemy's forces, and their ruin by battle.

The unity of action of all the troops of which an army is composed manifests itself in Napoleon's

eyes by *the unity of the line of operations.* We have already said what the *dépôt, the centre of operations*, of an army was. It is a defended town, containing all the supplies and the hospitals. The *line of operations* is the road which leads from the army to the centre of operations. It is obvious that the attention of the general was always turned to this side since all the supplies were collected there. There are disasters after which all is lost; on the morrow of a Waterloo, how little does the *centre of operations* matter? "Were you in the midst of your fortresses all is lost." But after some reverse that allowed of his continuing the struggle, Napoleon thinks only of fighting a new battle: repulsed at Caldiero, two days afterwards he takes his revenge at Arcola. Then it is that the general makes use of his centre of operations wherein he finds the resources necessary for a new battle. If it is necessary to beat a retreat, it would be upon the centre of operations.

In Napoleon's system of war an army would always have behind it a *place de campagne*, that is to say, a town fortified more or less summarily in a manner that ensures it against surprise, and this town serves as a centre of operations. Its park, its magazines, its hospitals will be *secure* and *assembled* therein; there is no need to cover the country with detachments to protect the sick and the supplies. After one battle we find there sufficient resources to fight another.

Now we can grasp the meaning of the Napoleonic maxim, "*An army should not have more than a single line of operations.*" If in fact it had

two different centres of operations for its right and its left, the army would not remain assembled when it had to beat a retreat. The attention of the general, as well as the army itself, would be divided between the two directions. No unity is possible without unity of the line of operations.

An army should have two or three fortified places available which may serve as centres of operations, but only on condition of using one at a time, and of having at any given moment one single line of operations.

The power of abandoning this line in order to take up another which abuts on to a different centre enables us to change the orientation of the campaign in a single day. An army in fact is deployed on a front appreciably perpendicular to its line of operations in order to cover this line well. If it changes its line of operations it will at the same time effect a change of front and take a new direction without exposing its supply columns or its magazines.

§ 2. THE ECONOMY OF FORCES

It is by battle that success is determined. Consequently we must engage as many troops as possible in the decisive battle. To leave nothing behind, to reduce evacuations and revictualling to a minimum, to hold the essential points in the theatre of operations as cheaply as may be—these are the means that Napoleon used in order to have as many troops as possible for the active army. But he always does it with judgment. He makes his dispositions in order to diminish the secondary

tasks, but he does not neglect such tasks as are essential. There is a minimum of strength which must be allotted to secondary theatres of operations and accessory needs. The just appreciation of this minimum and the just distribution of forces between the principal objective and the rest demand judgment, tact—in a single word, art, rather than a crude parsimony. To devote too much force to accessory needs is to enfeeble the army that is to deliver the decisive battles; to devote too little is to risk that this army should one day be taken in rear and deprived of its essential resources. The economy of forces does not consist in an exaggerated sparing of the forces destined to secondary objectives, but in devoting to each that which is indispensable to it. Skill consists above all in operating in such a way that the number of tasks to be fulfilled shall be as few as possible. From this point of view the divisional system gives great advantages. The armies of former days, which were always concentrated, were obliged to make detachments in order to hold important points of the ground, to cover their flanks, and to prevent the enemy from attacking their communications. A Napoleonic army, having distributed its divisions on a front of two or three marches, and having its supplies and its hospitals behind it at a place not more than five marches away, covers them sufficiently itself. All the divisions are an integral part of the army, and are to concentrate on the day of battle. They have no special mission. They may be in the first or second line, to the right, to the left, or to the

centre, but they have received no mission as advanced guard or flank guard, and are not ordered to hold or to cover any special point. The position which they occupy in the army as a whole acquaints them with the *provisional* rôles incumbent on them, until the moment comes when they are called into the general battle.

And another thing—an army deployed thus leaves very little ground outside its zone of action. The general having all his troops in hand is in a position to strike with superior force at whatever the enemy may detach against his flanks.

There have been, and there still are, theorists who want to hold troops in reserve until after the first battle. Without mentioning the only too celebrated General Rogniat, who would not employ more than half his troops in active operations and kept a second-line army available, one sees that the Prussians in 1806 left a big army corps on the Elbe; and the French in 1870 had the idea for some time of leaving Canrobert's corps at the camp of Chalons.

When Bonaparte in 1796 had established himself in Lombardy, Austria did not in one swoop send against him the 80,000 men she was able to raise in three months. First it was Wurmser with 40,000 men; beaten at Castiglione, this general was preparing a new offensive with a few reinforcements when he was attacked at Trente and hustled by way of Bassano right into Mantua. Then it was Alvinzi who appeared with a new army; beaten at Arcola, having received reinforce-

ments he was again beaten at Rivoli. However great the genius of Bonaparte, it is quite certain that he would not have beaten the Austrians if he had been attacked *at the same time* by all the troops which composed the successive armies of Wurmser and Alvinzi. Napoleon cannot sufficiently despise this manner of going on. "It is," he says, "the art of causing 180,000 men to be beaten by 140,000."

And yet it is what we did in 1870; our regular troops were beaten in Alsace and Lorraine; an army of reservists was destroyed at Sedan, and the second line troops, which were considered unworthy of co-operating with the active army in the first fights, sustained the honour of our arms for more than six months. What would these three armies have done if united?

This peremptory and terrible instance ought to have convinced all Frenchmen; and yet there are still adherents of this fatal system, who make a distinction between armies destined to the first collision and those of the second line, people who would cause the active army on the Meuse and the reservists on the Loire to be beaten in succession.

It is necessary, said Clausewitz, to practise the economy of forces in space and *in time*—that is to say, we must employ as many troops as possible *at the same point and at the same moment.* Sometimes we achieve the first result, but forget the second.

§ 3. THE EXTENSION OF FRONTS. ASSEMBLY AND CONCENTRATION

It is not enough for Napoleon to assemble the greatest possible quantity of forces in the main army; it is further necessary that these forces should take part in the battle. They must be used, disposed, and moved in such a way as to make battle as proximate and victory as certain and as complete as possible.

The divisional system, as we have abundantly proved, had for its object to assist in attaining this result. The army, distributed on a wide front, does not leave to the enemy the means of slipping away. Let the general but think of gaining the enemy's communications and succeed in doing so by his rapidity, and the latter is lost if defeated. It is a great haul like Marengo, Ulm, and Jena. Thanks to the wide fronts which he does not hesitate to adopt, Bonaparte gains much advantage from the divisional system in cornering his adversaries when they are at the last gasp.

In the month of April 1796 the 60,000 men of the Army of Italy are distributed over 120 kilometres; at the time of the passage of the Po the 30,000 men Bonaparte has at his disposal again hold 70 kilometres. Some weeks later he occupies the line of the Adige from Lake Idro to the sea, 160 kilometres, with 45,000 men.

Certain professors of tactics sometimes speak of the frontage admissible for an isolated army corps; here are some figures furnished by the ablest of

the masters at a time when there were neither quick-firing nor powerful guns, nor smokeless powder, nor railways, nor telegraphs.

For General Bonaparte the frontage of an isolated army corps may be 80, 120, 160 kilometres. Add to this the fact that for certain authors, French as well as German, Napoleon incarnates the principle of extreme concentration.

From 1805 on Napoleon commands 200,000 men, distributed in six army corps, a corps of cavalry, and the guard. No one as yet has handled such masses thus subdivided.

In 1805 he assembles the Grande Armée between Strasburg and Würzburg on a breadth of 200 kilometres; at the passage of the Danube it only covers 90 kilometres; it barely has to close in to fill all the space between Ulm and Munich, surround Mack, and make head against Koutouzoff.

In 1806 the army assembles in the valley of the Main on a line 200 kilometres in length. Then, suddenly contracting, it closes in on a front of 45 kilometres to cross the Frankenwald; on emerging it opens out to 60 kilometres and finally concentrates in front of Weimar.

In 1812 the frontage of the armies exceeds 400 kilometres. In 1813 it is about 100 kilometres a few days before Lützen; it is more than 150 kilometres when Napoleon is operating around Dresden, making head against Blücher on the one hand and the Army of Bohemia on the other. It reaches 300 kilometres if we take into account the corps detached at Hamburg.

Such are the frontages on which Napoleon

spreads his armies, be they armies of 30,000, 60,000, 200,000, or 400,000 men. That which at first sight may attract attention is that these frontages are pretty well independent of the numbers engaged; *the entire theatre of operations must be held*, whatever may be the forces at one's disposal. It is the necessary postulate for stopping or driving back anything that may wish to advance or to slip away, and for readily reaching the enemy's flanks and protecting one's own.

Thus Napoleon, on the one hand, advises keeping the forces assembled and concentrating them all for battle; while, on the other hand, he spreads out his armies on fronts of 60, 100, even 400 kilometres. Here, at first sight, is a glaring contradiction which it is necessary to reconcile.

Those writers who have not made a close study of the operations and writings of Napoleon, and whose whole intellectual equipment is limited to knowing some of his maxims, have fallen into a trap: they believe that Napoleonic tactics consist in always marching with a closely concentrated army. But, if they are read with care, the very maxims of Napoleon warn us of the distinction to be made:

"*The army must be kept assembled and the greatest force possible concentrated on the battle-field.*"

One sees by this phrase that with a certain amount of subtlety Napoleon establishes an important difference between the words "assembled" (*réuni*) and "concentrated" (*concentré*). For him the army is concentrated when it is

closely drawn together, "like a battalion in the hands of a good major." The word "assembled" is not to be used in such a case. The army is "assembled" so long as its component parts are so little separated from each other that the enemy cannot prevent their "concentration" or beat them in detail. From this it follows that in the neighbourhood of the enemy it is necessary that the different parts of the army should have but small intervals between them if it is to be "assembled"; but when far from the enemy these different parts are still "assembled," although they are widely separated.

When, for example, in 1805 Napoleon thought he should encounter the Austrians in the heart of Bavaria, towards Munich, it was enough for him to direct the army from the camp of Boulogne upon Ulm by way of Strasburg; and the armies of Hanover and Holland by way of Würzburg on Nuremburg; the two portions of the Grande Armée will draw near to one another between Donauwörth and Ratisbon in order to remain assembled; but as soon as it is asserted that the Austrians are on the march for Swabia, and that one may expect to find them behind the Black Forest, the Grande Armée will not be assembled unless all its columns are sufficiently near together to support one another as soon as the Rhine is crossed. The bundle of columns is then tightened up between Spire and Würzburg.

From this example we see how the army finds itself really assembled, in Napoleon's sense of the word, in spite of this frontage of 100 or 200 kilo-

metres, which at first sight seems to be incompatible with the idea of "assembly." The same fact will be established by the study of each one of Napoleon's campaigns. In those operations, bold as they were, and covering such vast areas, there is nothing to conflict with principles.

The zone, very broad to start with, in which the army is distributed is gradually contracted. On the eve of the battle it is only 30 to 40 kilometres wide; the army then converges on the enemy, and finds itself quite simply disposed so as to enclose him between a frontal attack and a flank attack.

It is thus that on August 4, 1796, Sérurier's division finds itself in position to fall on the left flank of the Austrians next morning; that on October 12, 1805, when the army has spread itself out beyond the positions held by Mack, Soult is directed quite simply to the outside of the right flank of the enemy; that on October 13, 1806, Davout has only to continue his march on Weimar to fall on to the left flank of the Prussians; it is the same with Ney at Eylau, at Bautzen, etc.

To sum up, in the majority of the battles fought or hoped for by Napoleon, the converging attack is prepared simply by the previous distribution of the army and, above all, by the breadth of the zone it occupies at the moment of advancing on the enemy.

This fusion of the battle with the operations as a whole is one of the most interesting results of the method of war inaugurated by Napoleon.

In the days of Condé, or of Frederick, two armies came face to face, deployed, and then, in

order to fight, assumed dispositions quite independent of their former marches. Each made his effort at the point which seemed to him most vulnerable, without bothering about lines of retreat.

This is no longer the case in Napoleonic war. The battle is the focus where the broad outlines of the campaign converge. If, all things considered, it is advantageous to turn the enemy on the north and to drive him towards the south, the fight which will impose our will on him must be conducted in such a manner as to push him towards the south. All Napoleon's attacks are made in the direction indicated by the operations as a whole. Even when the ground seems to favour another solution Napoleon does not depart from this line of conduct; at San Michele, for instance (April 19, 1796), although the Tanaro covers the left of the Piedmontese, it is there that he wants to attack them, so as to separate them from the Austrians, and, if possible, cut them off from Turin.

The movements being conducted on one and the same line of thought before and during the fight, the great operations quite simply prepare the manœuvre which will be carried out in the battle.

In 1806 Davout comes north of Jena by way of Naumburg in order to cut the Prussians off from Berlin; in 1809 Napoleon debouches from Landshut on Eckmühl to cut the Austrians off from the road to Vienna.

It may be argued whether Napoleon detached

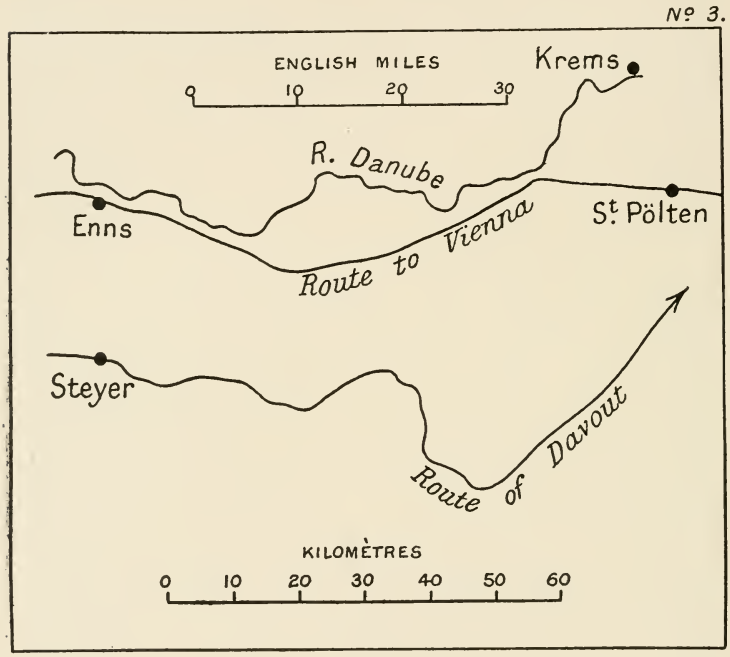
any corps laterally to a long day's march from the main body in order to produce this converging attack which is so common in his battles, or whether he contented himself with using in this way corps already detached.

Assuredly Ney before Bautzen or Eylau, Sérurier before Castiglione, Davout on the eve of Jena, etc., did not find themselves separated from the main body solely in order to be brought back into the hostile flank by a converging march; but it is no less certain that in spite of the initial extension of his front it would have been very easy for Napoleon to proceed to a close concentration of his forces before attacking, a thing which he never did. He has always regarded the converging attack, with the point of convergence beyond the enemy's front, as an extremely fortunate consequence of the initial deployment of the army. Finally, there is in fact an instance in which Napoleon shows clearly that he has broadened the zone of march of the army with a view to a converging attack (*e.g.* in November 1805, the detaching of Davout to 50 kilometres to the south of the army marching on Vienna). Nor can it be disputed that Masséna in the case of Montenotte, and Davout in that of Eylau, were detached to a flank of the army without other reason than flank attack in the battle.

The procedure, then, which we see usually adopted is to deploy the army at the outset of the campaign on a front wide enough to comprise the whole width of the theatre of operations; then, during the operations and up to the eve of

the battle, to maintain fairly wide dispositions for the march, or while remaining expectant, which should culminate at last in a converging attack. Napoleon has conceived ten or a dozen manœuvres on this same type.

He takes advantage of the division of the army



into big formations which can hold their own for several hours, and he spreads them over the whole theatre of operations to surround the enemy. He controls this tendency to dispersal, *keeps the army assembled, and has only one line of operations.* This solution, which reconciles all the extremes, is without doubt the work of genius, which alone could evolve so perfect a system.

"One of the essential points of the science of marches," writes Jomini, "consists to-day in knowing how to combine the movements of the columns well, so as, without exposing them, to comprise the largest strategical front possible so long as they are out of reach of the enemy. By this means one succeeds in deceiving the enemy as to the real objective one has chosen, and the army can move more easily and rapidly. But then it is also necessary to take measures beforehand for concentration to unite one's masses when it becomes a question of a decisive conflict. This alternative use of wide movements and concentric movements is the true stamp of a great captain."

The advantages which Napoleon obtained from extending his army over a vast space without ceasing to keep it assembled and ready to concentrate have never been sufficiently brought out.

His opponents more often feared to disperse their troops, and only formed them into one compact mass. If they gave way to the temptation of taking their enemy between two fires, they frankly divided their army into two masses separated by a big interval.

Does the enemy form but one mass, the French divisions envelop him; does he divide into two corps, the French divisions, while making head against the one and the other, worm themselves into the interval, maintaining the separation; then, in this central position, Napoleon operates by overwhelming the two hostile masses in turn.

Thus is produced the at first sight surprising result, that if the enemy's army is in the middle

of the French divisions, it is enveloped, whereas if the French army finds itself between the hostile masses, it separates them.

§ 4. SPEED AND SECRECY

The distribution of the divisions and army corps over a wide zone allows of bringing off outflanking manœuvres. It also has the advantage of concealing the plans up to the last moment.

When drawing near the enemy, Napoleon deploys his army on a width of about two marches. He steals a march by effecting his concentration during the night, and falls unexpectedly on the selected point of attack. This is the case at Montenotte, at Castiglione, and at the crossing of the Po in 1796. Again, it is by night marches that Bonaparte concentrates on Arcola or Rivoli. "This is what contributed most to make Napoleon's attacks so overwhelming, those dawns of his victories. The evening before, the enemy has knocked up against strong detachments everywhere; he has pushed them back, but slowly, and does not know where to march. At all costs he bunches up. Where is Bonaparte? Where is the French army? Above all, where will it be tomorrow? And it is on this query that night draws her veil. At sunrise, here is Bonaparte! And while the divisions seen the previous evening renew the fight, suddenly guns thunder behind the Imperials and they are those of troops believed to be 10 leagues away! It is Fiorella who has dashed in from Mercaria to Solferino,

Masséna from Rivoli to Mantua. It is, in one word, systematic surprise obtained by extension of the front and by night marches, and made terrible by those guns heard suddenly in rear in the morning mist."[1]

The rapidity of the marches makes it difficult for spies, as for cavalry, to observe them. The complexity of the combinations routs the observers. When in 1800 the Armée de Réserve comes down into Italy, generals used to the soporific methods of the Armies of the Rhine feel a sort of bewilderment.

"We who fought in the Armies of the Rhine, whose divisions went at the accustomed pace, moving methodically from one position to another, we could not conceive how the Army of Italy could make these enormous numbers of prisoners. . . .

"Its columns were formed of unequal divisions. At one moment, directed on all the issues, they there showed their menacing heads; at another moment, concentrated rapidly on a single point, like torrents they bear down, everything which is in their way. Ever on the move or in action, they alarm, harass, and destroy their enemy before he has had time to learn the numbers, the intentions, and the dispositions of the troops with whom he has to fight. . . .

"This fashion of making the marches of the divisions irregular has the advantage of rapidity in movements and of deceiving the enemy's spies; for, let us say that an intelligence agent of M. de

[1] Colin, "L'Éducation militaire de Napoléon."

Mélas has left Milan to make his report two days after our entry there. What could he have seen? What could he report? The French army was almost entirely between Milan and Lodi; the advanced guard had already crossed the Adda and was moving on Crema. But in a day the scene had changed." [1]

The new war, which derives all its value from the incessant motions of expansion and contraction of the divisions, is above all a war of movements, and requires that these movements should be conducted with the greatest briskness to reap all the advantages which they can give. When, for instance, Broglie in 1760 and Carnot in 1794 concentrated several divisions on one point, they did so with the intention of attacking the enemy with superior forces; but, operating slowly, disclosed their plans and allowed the enemy to make a similar movement.

Bonaparte, on the other hand, had prepared his plans well in advance; the right moment having come, he carried them out in an apparent disorder which ensured secrecy, and with a rapidity which was withering. He attached capital importance to this rapidity; without it, in fact, all plans fail, and one always finds oneself evenly matched.

Later on he will say: "One must always prefer the thunderbolt to the gun whenever one can.

"One must be slow in planning and brisk in execution. The art of war consists in a well-thought-out, extremely circumspect defensive, and in a bold and rapid offensive."

[1] General Duhesme, "Essai sur l'Infanterie légère."

When Beaulieu and Argenteau attack the French, they anticipate on April 11, 1796, meeting the divisions separated; they were so in fact on the 11th, but on the 12th almost the whole of the Army of Italy is to be found opposed to Argenteau.

In 1805 Mack discusses what the French can do, and learns with astonishment that there are 200,000 men behind him. In 1806 the commanders of the Prussian army deliberate how to attack, how to defend, how to counter-attack; they are just about to take a decision when they are informed that Lannes before Jena and Davout at Naumburg are within sight of their outposts.

Need one speak of 1814, the thunderbolts of Champaubert, of Montereau, of Craonne?

Rapidity is an essential and primordial factor in Napoleonic war. Without it there is neither method nor principle which holds good; the best-conceived plans will only result in a disaster. If we take any of the most brilliant of Napoleon's projects, and compare with them the corresponding plans of his adversaries, we shall hardly perceive any difference. What decided victory was the manner of execution, promptitude in resolutions and in movements.

It is, above all, in manœuvres about a central position that rapidity in movement is useful. This it is which admits of facing two adversaries in turn. At certain moments this rapidity is such that the marches of some units escape the historians.

What is there more wonderful than Masséna's

division, in the month of January 1797, brought from Castelnovo to Rivoli, fighting all day, and marching again all the night to crush Provera under the walls of Mantua? "Energy, energy, speed!" is the war-cry of Napoleon. It doubles the value of his army, where mass is multiplied by speed, as in the quantity of motion in mechanics.[1]

"Movement is the soul of Napoleonic war, just as the decisive battle forms its means. Bonaparte makes his troops move with a calculated rapidity. . . . Multiply themselves by speed . . . make up for numbers by the quickness of marches, are maxims continually on his lips. 'Marches,' said he, 'are war . . . aptitude for war is aptitude for movement . . . victory is to the armies which manœuvre.'"[2]

And this is what his soldiers mean in saying that he wins his battles with their legs. It is after the operations of Ulm that they make this remark, and it does not bear upon the direct march of a few days from the Rhine to the Danube; it is called forth by the movements around Ulm, the immense circle which Soult describes by way of Augsburg, Landsberg, Memmingen; the continual going to and fro of Ney from one bank of the Danube to the other, from Albeck to Gunzburg, from Gunzburg to Elchingen. Those are the marches which are characteristic

[1] It will be noted that Napoleon, as a mathematician who knows the value of expressions, says *quantity of motion*, and not *live force*. Many writers have misunderstood him.

[2] Cte. Dervieu, "La Conception de la Victoire chez les grands Généraux."

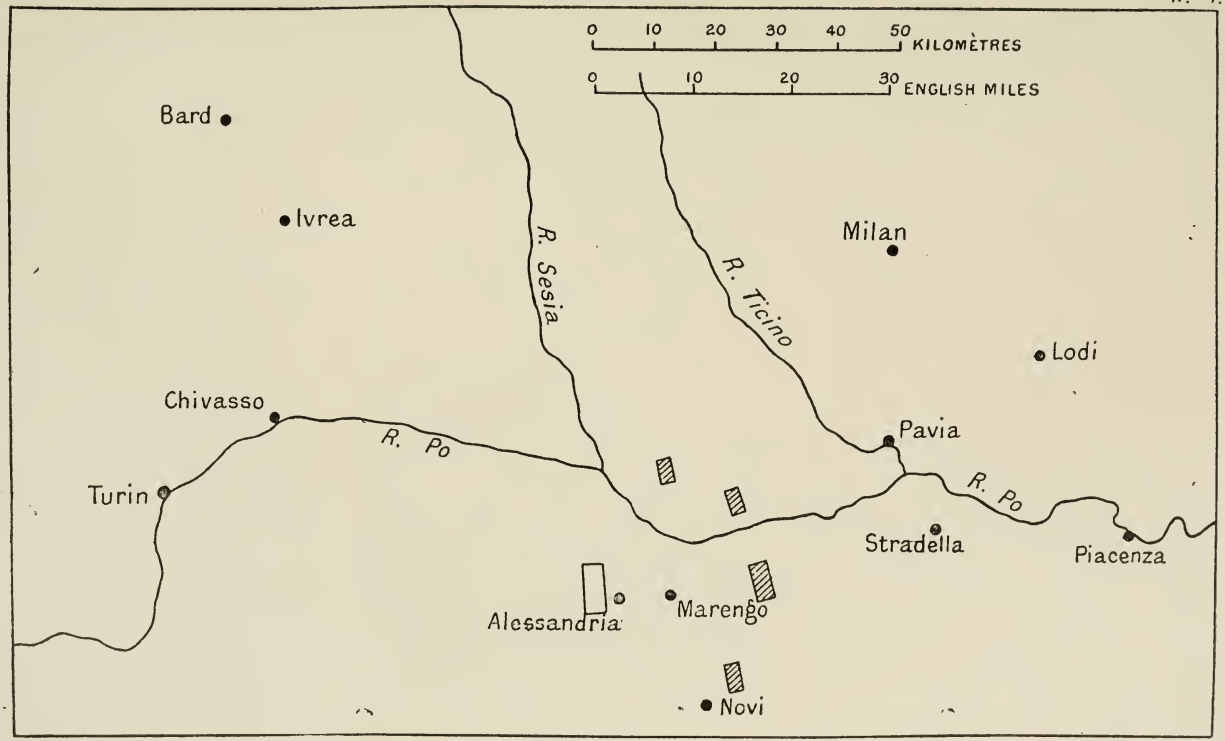
of the system, and outnumber the sum total of marches involved in the old form of war.

On the subject of this promptness in movement there is one essential observation to be made. No doubt marches can be forced, and Augereau between July 29 and August 2, 1795, and Masséna between January 13 and 17, 1797, pretty well doubled the average. It is the same with Davout hastening from Vienna to Austerlitz in 1805, and Masséna and Oudinot summoned with all speed from Augsburg towards Landshut and Eckmühl in 1809. But if Napoleon sometimes used exceptionally long marches to hasten an especially important manœuvre, it is not to them that he owes the remarkable rapidity of his operations, that incessant activity which led him so quickly to decisive solutions. There is a certain length of march which troops hardly ever exceed, and the movements of armies are made at a rate of 15 to 20 kilometres per day. A given general with such marches will not succeed in drawing nearer to his goal at more than 3 kilometres per day; it is the case with Moreau in 1796 and 1800, who displaces his army without making it advance. Another commander will foresee long beforehand both the goal he must attain and the incidents which may arise. The indifferent general proceeds by jumps, each day solving a problem and passing heavily from one problem to another. By amazing calculations Bonaparte combines the movements of his troops in such a way as to bring them by the shortest road to the final situation he desires, and at the

same time he regulates the daily marches so as to be able to deal with all the incidents which may arise. The movement of the Armée de Réserve from the Saint Bernard to the Stradella, and that of the Grande Armée from the Frankenwald to Jena, are marvels of their kind.

In 1800, at the exit from the Saint Bernard, Murat is directed on Lodi; Lannes, it would seem, is to follow the course of the Po. With a word Bonaparte upsets everything; a simple change of front to the right, and here is Murat occupying Piacenza, Lannes possessing himself of the Stradella, and drawing on Victor after him. "Thus," exclaims Duhesme, "the army found itself in column reversed, on the road to Alessandria; Loison's division, which at first had seemed to be the advanced guard while marching on Mantua, covered the rear of the army and acted as a rear-guard.

"These movements may appear simple and easy, and indeed they do partake of this character, which is that of all things fine in quality; but the march of an ordinary, although well trained, general would have been very different. To begin with, he would have waited at Ivrea until all his divisions had debouched to put them in line, which would have demanded a great deal of time. And as his object was to go to Milan, there to effect a junction with the divisions which General Moncey was bringing from Switzerland by way of the Saint Gothard, he would have marched methodically, his right on the Po, his left in the foothills of the Alps, at first behind


0 10 20 30 40 50 KILOMÈTRES
0 10 20 30 ENGLISH MILES
Bard
Ivrea
R. Sesia
R. Ticino
Milan
Lodi
Chivasso
R. Po
Pavia
Turin
R. Po
Stradella
Piacenza
Alessandria
Marengo
Novi

the Sesia, then on the Ticino, and thence to Milan, and finally partly on the Adda and partly on the Po, behind which, deployed in order of battle, his army would have awaited the arrival of Moncey's divisions to enable it to move forward to the assistance of Genoa. Did he wish to make the march of his columns irregular? He might perhaps do worse. Let us make no mistake about it; to combine the march and interplay of these columns, which seem to operate in every direction, and yet, however, must tend to one and the same goal, requires a depth and breadth of calculation of which all minds are not capable, and in trying to avoid routine one might often fall into confusion."

In the same way, in the Jena campaign, we see the Grande Armée marching straight before it in three columns, as if its one object were to get to Berlin by the shortest road; and all of a sudden it turns in a right angle and finds itself concentrated at the point determined for the battle. It then appears that all the marches ordered from the outset tended directly to this result.

Thus one must conclude that rapidity in operations does not consist in making the troops perform long marches which they cannot hold out against; the commander obtains this rapidity when he has the fixed determination to act, when he knows what he wants, when he has weighed the means of attaining his end, and moves on it steadily, without losing by hesitation or mistakes any of the 20 kilometres per day which his columns can do.

§ 5. GRAND TACTICS

The more profoundly we study one of Napoleon's operations, the more we are filled with admiration; but what astonishes us most is the characteristic which his dispositions possess of being adaptable to all circumstances. They are never taken with a view to meeting one single case, nor even several specific cases, but are conceived in such a way as to answer every new situation as if it had been the only one foreseen.

A disposition made by Napoleon never compromises the future, never restricts his liberty of action. This remarkable suppleness is due above all to the intervals and distances left between units, and to the form of the grouping of units, which offer straight fronts to all the directions which are of importance.

If we could have the assurance that the enemy will not stir during the whole of the time we are marching towards him, it would be enough to direct the various portions of the army on to the most favourable positions for giving battle; but this is a situation in which we shall never find ourselves. We have against us a living enemy, who will perhaps make mistakes, but who almost certainly will move and for his part try to manœuvre. For the operation as a whole, as for the daily positions of the troops, it is therefore necessary to have, not a rigid plan, but, as they used to say in the eighteenth century, a "plan with several branches," that is to say,

with several variations answering to what the enemy may do; the disposition of the army for each day must admit of choice from among all the variations for the morrow.

Certain generals, before and after Napoleon, have striven to anticipate the operations their adversary would undertake. They have worried themselves a good deal over this effort at divination, trying to find out from among the enemy's possible operations those which would be most dangerous or most probable, endeavouring to picture them to themselves in all their details. Napoleon, on the other hand, like Descartes, makes such a complete enumeration (of the moves open to the enemy) that he can omit nothing, and it is much simpler. For instance, let us follow his calculations for the campaign of 1805 in Moravia, according to the notes he has published. The Allies are at Olmütz; they will not remain there for ever, and when they move, it will be either to go farther away or to take the offensive. In either of these "general ideas" they may effect their movement on the straight line which is nearer to or farther from the French, or they may move to their left or to their right. Thus there are six cases to be considered which cover all the possible hypotheses; and in his calculations Napoleon provides for what he should do in each one of these six cases.

Is he undertaking active operations? He reasons just the same and never discards any hypothesis however unlikely it may seem. There is a striking example: In 1806, as soon as

he has crossed the Frankenwald, and while marching so as to attack the Prussians while cutting them off from Berlin, he thinks of all the movements they may make, whether to come towards him or to retire. If they do not seek for battle, they may try to retire towards the west or south-west—this would be of little interest, and demands no special provision; or they may move towards Magdeburg, or file past the French army towards Naumburg and the Lower Saal. This would seem to cover everything; but Napoleon neglects nothing. He also provides for the case, hardly imaginable, of the enemy trying to slip by behind the French army to reach Dresden by way of Saalfeld and Hof.

Thus he was wont to neglect no hypothesis, and to pass in review, so to speak, the complete series of cardinal points.

The hypotheses having all been considered, Napoleon takes his dispositions in such a way as to be able to manœuvre in every situation.

The above makes known to us the results Napoleon set himself to attain in his operations:

(1) To have his troops sufficiently assembled to be able to concentrate them on the battlefield.

(2) On the eve of the battle, to be spread on a front sufficiently wide for a portion of the army to come in on the enemy's flank.

(3) To be always in a condition to change his dispositions to meet the unforeseen.

(4) To conceal his plans.

Napoleon achieved these results by combined

movements of his columns. These combined movements are the subject of grand tactics. The Emperor is doing grand tactics when he calculates the marches of his divisions or army corps in such a way as to *concentrate*, to *outflank*, to *manœuvre*, to *effect a surprise*, or to *guard against the unforeseen*.

One must not hope to get from him formulæ for this the most difficult part of the military art—that which most requires personal gifts, and in which neither science nor a comprehensive mind is sufficient—that part of the art of war which most needs imagination and the creative faculty. Lannes had most brilliant qualities—he was admirable in a fight; with a wonderful perspicacity he could pierce through the movements and plans of the enemy, perhaps even better than the Emperor; but he was not yet skilled in grand tactics, Napoleon used to say; perhaps he might have become so. Aptitude for manœuvre is for a general the supreme skill; it is the most useful and the rarest of gifts, by which genius is estimated.

We give way to a curious illusion when we try to enclose this art—the most delicate of all arts—in a more or less childish formula; when, confusing higher geometry with mathematical drawing, we offer a straight line, a square, or a diamond as the normal formation of armies operating. Any theory which results in such solutions by that very fact alone shows its inadequacy. "If such questions had been set to Turenne, Villars, or Prince Eugène they would have bothered them

considerably," says Napoleon on the subject of some special situation. "But ignorance has no doubts; it wants to solve a problem of transcendental geometry by a two-dimensional formula. All these questions of grand tactics are unlimited problems of physico-mathematics, and cannot be solved by formulæ or elementary geometry."

We cannot dream of codifying grand tactics, of reconstituting the system of principles and methods which Napoleon applied; but a brief study of his operations may provide us with important conclusions and permit us to throw some light on a subject hitherto too much neglected.

(1) The army must remain assembled, able to concentrate for battle. On the eve of a battle Napoleon wants to have the bulk of his forces strictly concentrated. The remainder, comprising one or two large formations (these were divisions in 1796 and 1800, army corps under the Empire), may find itself more or less wide on one side in order to move against the enemy's flank, either by a night march or during the battle itself. Thus, on the eve of battle, the zone over which the army is spread may be from 10 to 30 kilometres wide and of but slight depth (12 kilometres at most).

During the preceding days this zone may be wider, and indeed it must be so. *A certain extension of front is necessary to ensure a rapid concentration*; for, to put an extreme case, if the whole army marched on one and the same road it would require more than four days to concentrate. At the beginning of the nineteenth century roads

were fairly scarce, and it was necessary as a rule to reckon on 15 to 20 kilometres' interval between two parallel itineraries. The Grande Armée of 1805 and 1806 had to form in *at least three columns* and spread over *a front of more than* 30 *kilometres* in order to concentrate in one day.

In every special case it is necessary to take into account a host of circumstances. The general regulates the distances and intervals between his larger formations, taking into account the network of roads, the distance of the enemy, and the obstacles which the ground offers to the movement of both sides longitudinally and laterally. He also takes into account the tactical methods of his adversary and his aptitude for manœuvre. Two days before Austerlitz the Allies were only 50 kilometres from Napoleon, and Davout had 110 kilometres to do to come up to him.

Usually the zone in which the army is spread some few days before the battle may be from 30 to 60 kilometres in width and depth.

(2) If one had only to anticipate an engagement in a given direction against a solitary and motionless enemy, it would be enough to march on a front of 30 or 40 kilometres, and with as little depth as possible.

When there is but one direction, *not dangerous, but important*, and the army marches in the same direction in which it may have to fight, it is disposed in line. This is equally so for the assembly of the army at the outset of all the campaigns: in 1805, between Strasburg and Würzburg; in 1806,

between Aschaffenburg and Bayreuth; in 1812, between Koenigsberg and Warsaw.

The army, when on the march, is not always directed towards the enemy; Napoleon frequently slips between the enemy and one of the limits of the theatre of operations. In this case the front of the army is not perpendicular to the direction of march; it is trimmed between this latter and the direction in which the enemy may be found. This is the case in 1806, when Napoleon moves against the communications of the Prussians. It seems that he can deploy the army pretty well on this front, but various considerations force him to complicate his dispositions. Let us try to analyse them.

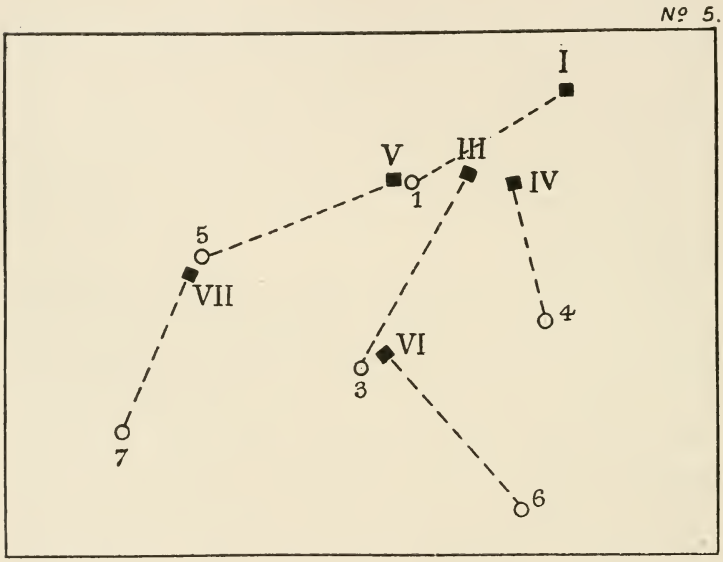
The Grande Armée has been set in motion in the direction of Berlin. Napoleon knows that the enemy is in front and on the left as regards the direction of march of the French. Therefore the front of the army must not be kept perpendicular to the direction followed, thus offering a flank to the enemy, but must be in a direction intermediate between that which the army is moving on and that in which the enemy is to be found. On October 11 the army executes a half-wheel to the left.

The details of this operation are exceedingly interesting. Various circumstances led to the centre column being in advance of the others, and the right-hand column being the least forward.

Napoleon turns the centre and left columns a little to the right, thus bringing their four corps

on to the new line, right wing forward. The two corps of the right column come into line by the shortest roads.

This wheel, the right wing leading, begins the movement which is to end in turning the Prussian left in the battle. It seems as though there is nothing to be done except to march like this,



hurrying the movement in order to overtake the enemy. This is exactly what Napoleon did with his four army corps, throwing his right on Naumburg and his left on Jena to hold the crossings of the Saale; but he keeps two army corps in second line at a good distance away from the first line. This is in anticipation of a possible move of the Prussians to bolt either in front or in rear of the French army. While taking into account the time

necessary for the transmission of information and orders, it is necessary to be able to attack either to the north-east or the south, as well as to the north-west. Ney remains within range to head off the enemy at Schleiz and Plauen; Soult halting at Gera can do the same in the direction of Leipzig. When the Emperor, at twelve in the morning, begins to receive news from Jena, he brings Soult to the cross-roads at Köstritz in order to place him nearer both to Jena and to Naumburg. Ney will be in no condition to rejoin in time to be of any use if the battle is to take place at Naumburg, but as the Prussian army is to be seen in front of Jena, there is always the fear that it may be trying to escape by Saalfeld.

On the 13th, Napoleon has at last obtained contact with the enemy in front of Jena, and orders concentration for battle. According to his custom, he concentrates closely the bulk of his forces, four army corps, under his immediate command. He counts on the detached corps on the right to take the enemy in reverse, and assigns to it as its *point of direction Weimar, beyond the probable battlefield.*

We have just analysed shortly the most interesting operation, from the point of view of grand tactics, of all those carried out by Napoleon. Others, notably the marches that led to Ulm, to Eylau, to Friedland, are also wonderful subjects for study, but we cannot examine them all. Let us, however, note the interesting offensive of January to February 1807, in which Napoleon, remaining uncertain till February 2 of the enemy's

true situation, adopts a disposition which enables him to form front to the right as well as to the left.

(3) While reserving to himself the power of acting according to the different situations that may present themselves, Napoleon arranges his marches in such a way as to conceal their true objective. He conceals it so well that to-day all military writers who have neglected to read the correspondence of 1806 still remain convinced that the Grande Armée sought the enemy at Leipzig. What contributed to keep the enemy in error and uncertainty was, as Duhesme so well observes, this way of *irregularising* movements. No simple geometrical forms—circles, squares, lozenges, hexagons—but an apparent disorder, which only resolves itself on the eve of battle.

(4) To obtain these different results the army must be in condition to manœuvre. On battle-fields Napoleon ensures to himself the greatest liberty of action by holding his troops closely concentrated. In the course of the operations he proceeds in quite the opposite way. In battle the divisions march massed across the fields, and they must be kept well in hand ready to start at the first signal.

In the course of operations, on the other hand, movements are only made on the roads. The various hypotheses considered demand that the army should be able to march or to fight in several directions; the columns must be kept separated: usually they are placed at cross-roads

(see the orders to Soult in 1806), in order to move readily in every direction.

The positions for each day are arranged in such a way as to admit of movement or concentration according to the various hypotheses and without revealing by the actual shape of the grouping the principal aim of the operations.

§ 6. EXPLORATION

Napoleonic war, since it was profoundly different from war that had been made previously, demands new organs, and these principally for exploration and protection. Napoleon creates them and uses them in such a way that no one since has known even how to imitate him.

If we leave the outposts on one side, by means of which a body of troops covered itself at short distance, and if we confine ourselves to that which concerns armies as a whole, *the object of protection is to conceal the plans of the general and the operations of the army; the object of exploration is to discover the plans and the operations of the enemy.* We do not engage the enemy's army unexpectedly, and we do not inform ourselves of his strength by fighting. Primary information is sought and tabulated in peace time ; the data furnished by official documents and newspapers, those again which are procured by espionage, are the foundation of exact calculations by means of which we endeavour to anticipate the distribution of the enemy's forces at the opening of the campaign that is to be,

This part of the service was admirably organised by the old régime, under which all military, administrative, and diplomatic authorities collaborated in the search for information. Napoleon reorganised it on the same basis; all his ambassadors and diplomatic agents contributed in giving him information. Through them he knows before the opening of hostilities what the distribution of the enemy's forces is.

Once operations are begun, it is only by espionage and by good fortune, if one may say so, that we get to know the principal movements and sometimes the intentions of the enemy. Newspapers are one of the most valuable sources of intelligence, and Napoleon attaches importance to getting them all; the secretaries of the Cabinet analyse them. Agents are established permanently in the large towns of neutral countries, close to the frontiers, and even in the enemy's country. Emissaries quarter the whole of the regions in which the enemy's troops are moving.

Such are the sources that yield the most important and the most numerous items of information. But they are intermittent. For some time they furnish very valuable news, and then in a critical moment suddenly fail: they are not to be depended upon. We must have recourse to troops to make sure of intelligence of an interest less vital than that procured by espionage, but which never fails.

So long as Napoleon is at a great distance from the enemy he marches in the provisional direction he has chosen, and is content with vaguely

knowing the zone in which the enemy's troops are. As he approaches, he needs more precise intelligence; spies continue to furnish it so far as possible, but the cavalry begin their work of exploration.

It is currently believed that the sole object of exploration is to obtain contact with the various parts of the enemy's army and to report on them, but the study of the Napoleonic wars makes one think that this conception is singularly narrow. Napoleon enters upon the operations with an absolutely premeditated plan of campaign, which admits of variations which in their turn have been carefully studied. Each variation corresponds to one of the hypotheses which the Emperor has made about the enemy. The object of exploration is to eliminate the incorrect hypotheses. It is directed at a given moment in a determined direction, in order to elucidate certain well-defined points, knowledge of which is essential in order to confirm or eliminate such or such an hypothesis.

The manner in which he provides himself with information stamps the value of a general rather well. Napoleon, with carefully worked-out plans, is always calculating the measures to be adopted according to coming situations; he does not wait for information to come to him as the chances of reconnaissance may ordain, but it is he who directs exploration, calling for light on some essential points of which he alone has seized the real importance.

A mediocre general, if he constructs his plan of campaign as Mack did, with no thought of the

enemy, or if he remains inert like Bazaine, gets on without intelligence. Another general, on the other hand, never can get enough; he waits to know the position of every one of the enemy's battalions before making his decision; he submits to the initiative of his adversary.

We have seen how Napoleon, by the initial direction given to the movements of his army, reduces to a minimum the uncertainty and the number of hypotheses. Choice among these only becomes necessary in the neighbourhood of the enemy—at most, two or three marches away. The Emperor does not try to get detailed intelligence as to the positions of the enemy; even if the information were exact and complete to-day, it would be less so this evening, and would not be so at all to-morrow.

In view of the operation orders for the following day, it is not so much the present position as the intentions of the enemy that one must know, and one can only arrive at them by interpreting all clues. Napoleon considers the material signs by which the plans of his adversaries may, according to circumstances, be disclosed, and determines a critical point, which is such that, according to what is discovered there, certainty is achieved as to what line of action the enemy is adopting. Exploration is directed on this point.

In October 1806 early intelligence reported the mass of the Prussian forces between Weimar, Gotha, and Göttingen; Napoleon, who is six or eight days' march from Weimar, does not ask for more. At such a distance the details are of no

interest. The Grande Armée takes the direction of Berlin, but exploration is not over. The Emperor is kept informed by letters seized in the post office, by travellers, by agents, etc. The cavalry throw out some patrols to reconnoitre for the heads of the columns.

Little by little the reports of the secret agents become definite; the Prussian army is closing in about Erfurt and Weimar, between Jena and Gotha. Napoleon still marches on Berlin, leaving the enemy on the left. On the 12th, Lannes is in sight of the Prussian army; the slightest movements of the Prussian columns become of importance; their size appears quite other than heretofore. The light cavalry of the army corps provides information which takes longer to reach the Emperor than the enemy requires to move 20 kilometres. Whatever points of interest these reports may offer, they do not suffice to determine a decision one day in advance. Napoleon seeks something else. "*I am enveloping the enemy completely*," he said, "but *I must have information as to what he wants to do*." And while for ten days he knows the enemy to be on his left at Weimar, he sends his exploration cavalry out ahead and to the right on Leipzig. "It is not the sort of exploration you usually practise," he explained to Murat; "do as you saw me do at Gera."

The whole of the cavalry corps then is sent into a region in which it is known that the enemy is not, but which is traversed by his principal lines of communication. Leipzig besides is a very important town, to which letters and news must

flow. Murat goes to intercept convoys and couriers on the roads; at Leipzig he empties the letter-boxes and questions travellers. On receiving his intelligence Napoleon exclaimed: "At last the veil is torn; the enemy is retiring on Magdeburg!" He did not say, "The enemy is at Weimar," because he had known that for some time, and *the veil which had been torn concealed, not the position, but the intentions of the enemy.*

This is an example of Napoleonic exploration. That day it was negative, that is to say, carried out in a zone where there was no enemy; in other cases it will seek the enemy himself, it will be positive. It was done by an entire corps of cavalry, divisions of hussars, dragoons, cuirassiers, and artillery, because the weakest hostile battalion encountered by chance at Leipzig would have checked the exploration of a regiment or of a brigade.

Let us notice above all that the task of exploration was not permanent. It was ordered at a definite moment and lasted two days.

In other circumstances exploration may be positive, prolonged, permanent; it can be carried out by a small body of troops. Napoleon's campaigns offer us examples of every kind of special case; but never will he have "cavalry dust." For great objects he employs great means.

§ 7. PROTECTION

Protection has not for its sole object to cover troops against all surprises; it shields the projects of the general himself. This result cannot be

obtained save by surrounding with a screen or curtain the whole zone in which the enemy may surprise couriers and columns in movement.

According to circumstances, it is either infantry or cavalry or both together that serve to mask the movements of the army. There was very rarely any question of such a service in ancient war, when armies moved all in one piece. We may, for instance, consider Frederick's advanced guard at Leuthen as assuring the secrecy of his manœuvre, but protection was organised by Napoleon in quite other proportions, in order to mask the interior movements of his army.

Just as with exploration, protection is not organised in a permanent manner. There are movements which we do not try to conceal. Thus the marches which preceded the battle of Jena or that of Eckmühl are covered by no curtain. It is their rapidity alone which makes them secret. Usually Napoleon's decisive manœuvres could be accomplished under cover. In order to mask them he makes use of natural obstacles, mountains, watercourses, forests, swamps, of which he has the defiles held. In Napoleonic war, which is all movement and all offensive, that is the proper rôle of obstacles; they are not used as lines of defence, but as masks, auxiliaries to movement and to the offensive.

In 1805 the assembly of the army is in part concealed by the Rhine and the Black Forest; in 1806 by the Thuringian Forest. In 1812 the manœuvre on Smolensk is masked by the Dnieper; in 1800 the concentration on Schaff-

hausen suggested to Moreau was to have been made under shelter of the Rhine. In every one of these cases the line that covered the movements of the army was held by more or less strong posts.

There is a particularly interesting example; it is provided by the dispositions adopted before Austerlitz. Napoleon wants to encourage the Allies to take the offensive in the direction of Brünn by making them believe that he has barely 45,000 men at his disposal. His cavalry covers his front, but stretches well beyond it, to the right as far as the Danube, to the left up to the mountains of Bohemia, on a length of 200 kilometres. This curtain of cavalry, supported by infantry posts, masks the roads by which Napoleon is concentrating Davout's and Bernadotte's corps at the last moment to fight the battle of Austerlitz.

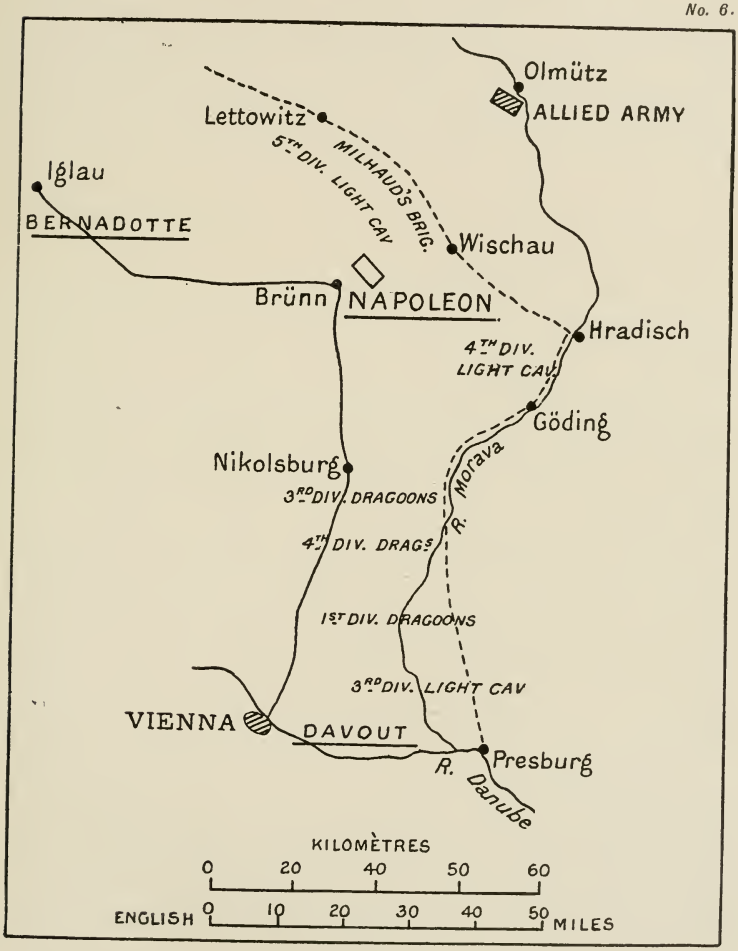
The protective cavalry extends its action beyond the front of the armies; it is the commander-in-chief alone who can fix the extent and situation of the curtain which is to be drawn. He uses for it at the same time both the independent cavalry and that of the army corps.

All this service of exploration and of security is "irregularised," like the marches of the columns. We might seek vainly not only for sealed patterns and uniform methods, but for dispositions of a regular structure; often the same troops are employed at one and the same time for exploration and for protection. They report the presence of the enemy, in order both to keep the higher

command informed and to put the troops on their guard.

All the system of protection of which we have

No. 6.



just been speaking has for its aim only to stop reconnaissance. There is no question of repulsing any serious attack of the enemy's troops. In this

respect the army protects itself. There is neither advanced guard nor flank guard; the different first-line army corps watch the directions by which the enemy can come on them. Napoleon will have no partial engagement and above all he will have no partial check. He never made a manœuvre depend on the resisting capacity of a body of troops; that is too uncertain a factor.

§ 8. THE OFFENSIVE AGAINST A SINGLE ENEMY

We have studied all the factors of Napoleonic war. Let us try to grasp an operation as a whole.

If the enemy forms but one single mass, Napoleon combines his movements with a view to closing with him under the most favourable conditions for battle.

As the study of his battles has shown us, he wants to attack his adversary in front and in flank at the same time. In the first place he will succeed in doing this by distributing the large units of his army over an extent of several miles, so as to make them converge on the enemy.

But this is not all. In the operations as a whole, as in the battle, he attaches great importance to the advantages which a flank attack or, better still, an attack on the rear of the enemy's army ensures. Every time he sees the possibility of doing so he will try to get at the enemy's communications, so long as he can do so without compromising his own, or so long as, confident in his strength, he does not fear to expose his own.

There was only one occasion on which he could foresee with some certainty that he could reach the enemy's communications: it was in 1800 when he moved the army of Dijon to Milan by the Great Saint Bernard while Mélas operated on Genoa and Nice. In his other campaigns he acted in a way to obtain this decisive result if the enemy committed some mistake. He ardently longs that they should, but he dares not hope for it, much less count on it.

In 1805, for example, the movement of the Grande Armée is directed in such a way as to bring it on the rear of the Austrian army, if only the latter delays in escaping; and yet, having arrived at Donauwörth and Augsburg, Napoleon cannot convince himself that Mack is not retreating by the Tyrol.

There is here an essential shade we must define. Save for the campaign of Marengo, Napoleon never assumed with certainty that he could reach the line of his adversary's retreat, but he always operated in such a way as to seize it if the enemy lent himself to it. Never of deliberate purpose did he renounce this enormous advantage by making a frontal attack when he could do otherwise. If he had had no actual hope of succeeding, still he would have operated in the same way. His object was not only to turn to good account all favourable chances for cutting off the enemy's retreat, by merely menacing it he obtained an appreciable result. As in the battle, Napoleon counted on this menace to shake the morale of the enemy, to make him undertake

movements in the course of which he would become more vulnerable, and then to pounce on him in the very act. When Napoleon succeeds in getting at the enemy's communications, he rushes on in a great hurry. Noting behind his adversary some natural barrier, he seizes at once its principal passages, after which, his army being disposed according to his views, he moves against the enemy.[1]

On November 14, 1796, the Austrians had committed themselves in the trap between the Adige and the mountains. Bonaparte holds the bottom of it at Verona. He knows that behind the enemy is a little stream, the Alpone, which is difficult to get over and is only traversed by one road at Villanova. Leaving Verona during the night he hurries to Villanova; by bad luck a Croatian battalion which checks him at the bridge of Arcola causes the manœuvre to fail.

He is more fortunate in the following campaigns: in 1800 he establishes himself on the communications of Mélas at the Stradella and on the Ticino; in 1805, before attacking Mack, he first seizes the whole course of the Lech; in 1806, before assailing the Prussians at Jena, he holds the Saal at Jena and at Naumburg. In 1809 the Austrian corps oscillate in the confined space comprised between the Danube, the Isar, and the Abens, which was some 70 kilometres every way. Napoleon does not hurl himself on them on the strength of his first information, but first goes and seizes the principal exit at Landshut; then

[1] See the theory of these operations in "Guerre napoléonienne: Théorie et Technique," by Colonel Camon.

he is master of the situation, and strikes securely round about Eckmühl.

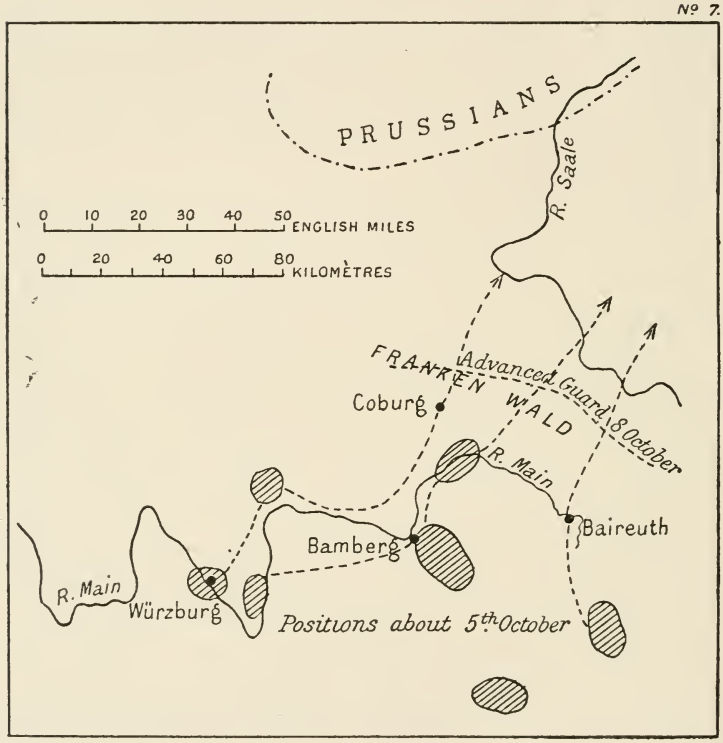
One thing is remarkable. While great turning movements succeed but rarely in battle, great manœuvres directed against the rear of an army often succeed. Bassano, Marengo, Ulm, Jena, Landshut, were completely successful. If at Villanova (1796) and Guttstad (1807) the enemy escapes from the manœuvre, he at least beats a sufficiently hasty retreat to facilitate the victories of Arcola and Eylau.

To get at his adversary's line of retreat Napoleon naturally avoids getting entangled with him; he makes his army file along one side of the theatre of operations, avoiding anything like an encounter.

In order to prepare this operation the army is *assembled* on a very big front, facing the enemy, and as far as possible behind a natural screen of river, mountain, or forest. Then suddenly it closes on one wing, and by a sudden and rapid march it makes a bound forward. The enemy finds himself confronted with an accomplished fact and an irremediable situation before the movement has been reported to him. While he is still considering what remains to be done, a march or two brings the French on to his communications.

Thus, in 1805, the army which commences to assemble between Strasburg and Wurzburg closes on its left while moving rapidly on Donauwörth. While Mack is learning of the passage of the Danube, Napoleon from Landsberg possesses himself of Augsburg.

In 1806 the army has assembled on the Main from Wurzburg to Amberg; as soon as it is ready it closes on its right, avoiding contact with the Prussians. In three long marches it has crossed the forest that concealed it, and has



attacked Gera. While Brunswick wonders what is happening to him, Napoleon occupies Jena and Naumburg.

In 1800, in the magnificent plan of campaign suggested to Moreau and which he was unable to understand, Napoleon wanted him to assemble

his army behind the Rhine between Constance and Colmar, close suddenly on his right, and in the same move cross the river at Schaffhausen, and so in two days find himself behind the Austrians who were holding the Black Forest.

In the same year, when the French and Austrians were fighting along the whole chain of Alps between Geneva and Mont Blanc, he brings the Army of Reserve to the extreme left, from the Saint Gothard to the Saint Bernard, and descends into the Milanese while the enemy are gathering themselves together.

Napoleon operates in the same way in April 1809, when he hurls Masséna on Landshut by forced marches, to turn the Archduke Charles and intercept his road to Vienna.

In 1812, in the operations at Smolensk, his army being deployed behind the forest of Bieski, he closes up suddenly on his right, and moves by way of Smolensk to seize the Russian line of retreat. It is very simple, very natural, to act in this manner on the extreme right or the extreme left when one wants to turn the enemy. But there must be some difficulties in doing it, since Napoleon was the only general capable of conceiving and of executing such operations.

To assemble the army in a wide zone, to cover it by making use of natural obstacles, under cover of these to close the army suddenly and throw it forward, to hold it constantly ready for all movements, all evolutions, this is what Napoleon alone knew how to do. Whatever the difficulties may be they are well compensated by the advan-

tages. Not only does this offensive on the extremity of the theatre of operations prepare the seizure of the enemy's communications, but it also lessens the uncertainty in which a general has to live and take his decisions in war. By keeping at one end of the theatre of operations he reduces the number of directions in which he has to look for the enemy, and the number of combinations he has to foresee. By seizing a river barrier on one of the communications of the enemy, he reduces the number of operations the enemy can attempt.

In 1806, for instance, Napoleon, marching to the extreme right along the frontier of Bohemia, knows that the enemy is on his left. If he had marched in the direction of Weimar, on pretence of going straight to his goal, he would have been in the greatest uncertainty, obliged to obtain information to guard himself and prepare for battle in all directions.

The seizure of a barrier or an important communication of the enemy gives a greater measure of certainty. When, in 1809, Napoleon makes Masséna and Oudinot debouch into the confined space between the Danube and the Isar, in which the Austrians are moving, in what direction will he himself march? Straight on them? But he is still 40 kilometres from the point where they have been reported, and before he comes up with them they may be running off in any direction—Landshut, Straubing, Ratisbon. Napoleon, therefore, without heeding hourly information about the enemy, goes straight to close the bolt-

hole at Landshut, leaving the enemy no exit but that of Ratisbon. Thenceforward the problem is singularly simplified; by marching from Landshut on Ratisbon, Napoleon is sure of finding the Archduke Charles.

Clausewitz is right in saying that in war a general moves in a cloud of uncertainty; he would have done still better to show us how with two strokes of his wand genius cuts and disperses the cloud. The offensive manœuvre on one extremity of the theatre of operations presents one other immense advantage; it is that which is most favourable to liberty of action, since it keeps us from contact with the enemy and his influence.

Liberty of action can never be complete in war; it is limited by the presence of the enemy, and the only movements that we can pretend to carry out freely are those we can make without encountering him. Assuring liberty of action above all consists in only planning operations which cannot be countered by the enemy; which can be carried through to the end without risk of interruption by an encounter. By taking the necessary precautions one can always surmount material obstacles. The Great Saint Bernard and the Niemen can be crossed without miscalculation, but a handful of men can stop an army at the Bridge of Arcola, and its artillery at the fort of Bard.

Napoleon's first care, then, is to avoid engagement until the decisive day. He frequently repeats the recommendation that concentration

must be effected beyond the enemy's reach. As far as possible he avoids partial encounters with the enemy. He desires that contact shall only take place when the whole army is ready to give battle.

Thus, in 1806 Lannes receives the formal order, several times repeated, not to engage unless he comes across an isolated division of the enemy; if he surmises the presence of a whole Prussian Army Corps, he is to avoid contact and report. He is to halt if he can do so without exposing himself to fight; he is to fall back if in no other way he can avoid engagement. He is only to advance again in order to attack with the whole army concentrated. On the approach of the Russians on December 1, 1805, Napoleon holds himself ready to beat a retreat if he has not the time to concentrate the corps of Davout and of Bernadotte before contact is taken.

Thus, concentration is not effected round a corps already engaged with the enemy, but round a corps which is the more solid because it is intact, free in its movement, and in condition to obey all orders.

It once happened that Napoleon, in consequence of some mistake, got entangled with the enemy. It was on February 3, 1807, at Jonkowo. It was just that day that his adversary escaped from his clutches.

To Napoleon the best way of safeguarding his liberty of action was not to allow one of his big units to get entangled with and damaged by the enemy. He also puts himself in a position to

profit by this freedom, by not fettering himself with bad march dispositions.

We lay stress on this part of the Napoleonic method because recently a way of ensuring liberty of action has been devised which consists of allowing divisions to be caught and beaten by the enemy on the pretence of entangling him and fixing him. It is the strategy of the fisherman who, with one finger, catches a lobster by the claw.

This false manœuvre has been evolved by applying to offensive operations methods suitable to defensive operations, without even leaving them all their value. Let us never forget that in the offensive it is force and rapidity, together with the decision of the commander, which guarantee the protection of the army better than any mere measure of precaution can do. To multiply supporting points, flank-guards, and detachments of all sorts far from the army is to misunderstand the offensive. They weaken it at the moment when it has need of all its strength to obtain success at the decisive point. They betray the timidity of a leader who ought to be bold, one who takes the offensive in deference to the opinion of others, and does not feel himself impelled to it.

In 1806 Napoleon assembled his army in full security behind the Frankenwald. On the day that he decided to cross it there was no covering force, no flank-guards, only speed. In one bound the army jumps to the Saal. It has initiative, it has strength, it is beforehand

with the enemy's attacks and disdains to bother about them. By the mere fact that it attacks energetically and resolutely, it disconcerts smaller combinations, rends the spiders'-webs, and makes nothing of dragging the débris along on its flanks.

§ 9. DEFENSIVE. CENTRAL POSITION

It goes without saying that we do not find a single example of the pure defensive in Napoleon's campaigns. In those operations in which the offensive follows the defensive, or a period of expectancy, it is produced immediately and the defensive action is but of short duration. It is especially in 1796–7 that we find examples of it. There we see the defensive-offensive method of Bonaparte in the full light of day.

The divisions of his army are distributed on a wide front, and each occupies a very solid position, which it could hold for at least a day against superior forces. They are mountain positions like Voltri, Montelegino, the Corona, Rivoli; or even fortresses like Verona and Legnago on the Adige.

Rampon could hold on indefinitely at Montelegino; Cervoni holds on till nightfall at Voltri, and retires without having suffered severely; the same with Joubert on the Corona at Rivoli.

It is by placing divisions in such strong positions that we can count on their capacity for resistance to procure the time necessary for concentration. But even so we are often taken in. It is not without serious material and moral wastage that

Masséna is hunted out of Rivoli on July 30, and Vaubois from Lavis on November 16, 1796.

In 1807 the Grande Armée, in cantonments on the right bank of the Vistula, is unable to establish its army corps in such strong positions as in 1796. So, in the event of attack, a corps threatened by the bulk of the enemy's forces is to slip away while the others are concentrating. In this case, as in a purely offensive operation, concentration is effected in such a way as to cut the enemy's line of retreat.

While Bernadotte is retiring before Bennigsen with the order to fall back, if necessary, as far as the Vistula, the rest of the army hurries on to the Alle to seize its passages.

There is in fact very little difference between purely offensive operations, if they are considered from the day the enemy appears in sight, and the operations of the offensive-defensive.

When Napoleon has forces very inferior to those of the enemy, we know how, in 1814, for instance, he understands the defensive. It consists of a series of attacks, of furious blows in all directions. When others have to conduct a defensive war, he advises them to use the ground so as to combine defence with attack. Sometimes it will be by taking up a central position in the plain in order to attack the enemy in turn as he debouches from the mountains. Most often it will be upon a watercourse. A grave error will be committed in simply trying to prevent the enemy's passage.

"Nothing is more dangerous than to try seriously to defend a river by holding the opposite

bank; for once the enemy has surprised the passage—and he always does surprise it—he will find the army in very extended defensive order, and he will prevent it rallying.

"A river, or any sort of a line, can only be defended by holding the offensive points, for when one has done nothing but defend oneself, one has run risks to obtain nothing; but when one can combine one's defence with an offensive movement, one causes the enemy to run more risks than the corps which is attacked. . . .

"There is nothing else to be done than to so dispose of one's troops as to be able to assemble them in mass and fall on the enemy before he has completed his passage."

Napoleon's defensive, like his offensive—even more, perhaps—is made up of nothing but movement.

All Napoleon's contemporaries understood, as he did, the advantage there was in turning or outflanking an enemy; but the generals who opposed him did not know, as he did, how to combine envelopment with the assembly of forces. Usually they divided their troops into two or three completely separate armies and tried to bring about a converging and simultaneous attack on Napoleon's army. It is then that Napoleon took up a *central position* between his adversaries, around which he faced turn and turn about one or other of the enemy's armies.

Military writers, following the example of Jomini, after strangely naming this method the *manœuvre on interior lines*, have wished to see in

it Napoleon's favourite operation. During long years they have disputed whether this preference had any motive, and if there was reason for practising this so-called *manœuvre on interior lines* rather than the turning or enveloping manœuvre.

It is easy to prove that the question does not arise. There are cases in which manœuvre on a central position is necessary, and the rest of the time, with the best will in the world, it is impossible to have recourse to it.

When Napoleon finds himself with inferior forces in presence of two separate armies of the enemy, like the English and Prussians in 1815, it is natural that he should throw himself between them in order to prevent their joining, and that he should try to beat them in succession. He could not try to envelop them both at once in a vast outflanking movement.

Let us suppose him, on the other hand, in presence of a single army; how could he take up a central position?

Napoleon, then, had recourse to this latter solution every time that his enemies invited him to it by forming two separate armies. He could never have had the notion of making it into a panacea.

What is true is that his enemies, convinced of the advantages offered by turning movements but neglecting the assembly of forces, afforded him with astonishing frequency the opportunity of manœuvring in a central position.

As it is usually pictured, the manœuvre on a central position consists in this—that Napoleon,

being placed between two armies, contains one with very inferior forces, while he directs superior force on the other and beats it; then, leaving a mere rear-guard in front of the second, he leads the mass of his forces against the first.

In practice this manœuvre shows itself in various forms, according to circumstances, and Napoleon was probably wrong in his last campaign to adhere to methods which had succeeded nineteen years earlier.

In the spring of 1796 he had the game, relatively speaking, in his own hands. One after another his adversaries at first opposed to him only detached divisions, sort of advanced guards. He was able to beat *some* Austrians at Dego, and *some* Piedmontese at Millesimo on the same day; then, as the bulk of the Austrians were still very far away, he was able to neglect them provisionally in order to devote himself to the Piedmontese.

In his beautiful manœuvre of Castiglione he had to play with his general reserve between two hostile armies debouching, one to the west, the other to the south of the lake of Garda. But one of them, after a first check, had renounced the contest at once, and Bonaparte was able to have it pursued by a weak division, and to throw the rest of the army on Wurmser at Castiglione. During the days of Arcola a single and ill-commanded division sufficed to hold the hostile corps which was coming down the Adige from Trente to Rivoli.

In none of these three operations did Bonaparte thoroughly pursue the adversary he had

first beaten. Thus a conception of manœuvre between two enemies may have established itself in his mind, involving a series of butting blows to right and left, while never pushing home any but the last attack. In 1815, victor of Blücher at Ligny, he did not pursue him and destroy him, as he might have done without risk, still having a line of operations open by Mezières on Thionville; from Ligny he marches to Waterloo, leaving only Grouchy in front of the Prussians.

The case of 1813 is more complex. Napoleon has not, as in 1796, two of the enemy's armies in front of him, but three; and one may ask oneself if in war, as in mechanics, the problem of three bodies is not insoluble. Then again it is a case of great masses in the field; 450,000 men against 510,000, and, above all, an almost unlimited space in which they can move about, for the Allies can fall back to the heart of Russia and Hungary.

The problem is far more difficult to solve than that of 1796. But it is not beyond the strength of Napoleon the soldier; it is Napoleon the statesman who hinders the solution.

This solution is clearly perceived and indicated by the Emperor: to reduce the enemy's masses to two by advancing boldly on the one that can be turned with least difficulty, and of which the line of retreat is most limited. By throwing Bernadotte into the Baltic, the blockade of the fortresses of the Oder and Vistula would be raised, and he could return with sufficient forces to fight Blücher and Schwarzenberg combined.

But on this theatre of operations there stands Dresden, the capital of an allied sovereign; and Napoleon will not abandon Dresden. He makes it his dépôt, his centre of operations, his central position is about Dresden, and when he removes it to Leipzig, Napoleon still leaves a corps behind at Dresden, which is lost as far as the battle goes. Policy intervened before the decisive battle, and lost all. The movements to and fro about Görlitz, the successes without results, like that of Dresden, exhaust the army without providing victory. Against the adversaries of 1813, who knew how to avoid or how to engage in battle according to circumstances, so delicate a manœuvre as that of 1796 is unsuitable; it is necessary definitely to crush one of the enemy's armies before passing on to the others. The manœuvre on a central position is still possible, but with other methods. Will it always be successful? It very nearly failed in 1796, and it needed all Bonaparte's genius to finish off Wurmser. In 1813 the Allies hit off in their Reichenbach plan a line of conduct that made the manœuvre about a central position more than difficult; such one of their armies as Napoleon selects for attack is to slip away, while everywhere else the forward march is to be carried on concentrically. It is in this way that Blücher and Schwarzenberg end by surrounding Napoleon at Leipzig without his having been able to fight the partial battles he was continually seeking. We have seen that in battle the advantages of envelopment continually increased at the expense of the central position.

It is the same with operations as a whole, and for the same reasons.

Let us imagine the campaign of 1813 begun again, but under modern conditions. Napoleon's movements to and fro would not have been helped by them, while telegraphs and motor cars would have enabled the Allies to regulate and harmonise their operations.

CHAPTER IV

WAR IN THE NINETEENTH CENTURY

§ 1. NAPOLEON AND GERMAN DOCTRINE

What we know to-day about the principles and procedure of Napoleonic war we owe to the publication of innumerable documents which have been brought to light during the last fifty years; firstly the "Correspondance de Napoléon," then the numerous works embodying original documents, of which Colonel Foucart gave an example in his "1806." Eighty years ago no one was in a position to penetrate so deeply into the knowledge of the Emperor's projects; men had but a general notion of his campaigns. In a few excellent pages Jomini showed well what a manœuvre in the Napoleonic sense might be, but he buried this precious passage under a heap of queer definitions and trifling dissertations.

What were then principally seen in Napoleonic war were its essential characteristics, that is to say, its offensive spirit, its vigour, and its promptitude.

That which Condé had been unable to do in 1650 and Frederick in 1750, Napoleon was able to do in 1806—that is, to prepare, to obtain, and

to exploit to the utmost decisive battle. Thanks to the resources of modern tactics he was able to give free rein to his genius, and it was the rapidity and fury of his offensive which men noticed.

If some sort of statistics were to be drawn up of his campaigns and his battles, it would be proved that the greatest results had been attained by energetic attacks and pursuits. Extremely skilful manœuvres like those of Lützen and Bautzen did not gain the greatest trophies. Officers who had been through the wars of 1809 and 1812 in the army of the Allies maintained that the success of Eckmühl would have been greater if the détour by Landshut had been omitted; that the ingenious manœuvre of Smolensk had thrown away the opportunity of meeting and beating the Russians.[1]

Finally the events of 1813 and the loss of the communications at Leipzig had levelled a decisive blow at the audacious and rather artificial doctrine formulated so clearly by the Emperor, according to which the line of operations was alone to be considered, the line of retreat being of no importance. In 1812-13 and in 1813-14 men had seen long-drawn-out retreats, proving the necessity for an army of having its communications with the mother country secure throughout their length. And also in 1812, as in 1813, the great number of the troops and the extent of ground on which they had to deploy had obliged Napoleon himself to abandon the principle of

[1] Clausewitz, "Campagne de 1812."

unity of the line of operations which he made the foundation of his doctrine.

And so there emerges a conception of war which sees almost solely its moral aspect, and makes of it an act of vigour and of energy; this is the conception of Clausewitz.[1] Compared with the masterpieces of Napoleon it seems very incomplete, but from them it has taken the better part, and there is no conception more capable of inspiring a nation of warriors. This has been proved.

Clausewitz had the incomparable merit of driving formalism out of military education. In spite of the errors of detail which his books contain, whosoever is brought up in his school becomes incapable of seeking the secret of victory in formalism or in empty phrases—he thinks only of forces, material and moral.

In war, more than in anything else, great thoughts come from the heart, and there is no better inspiration than hate. It is hate that made Blücher triumph over Napoleon. Analyse the best manœuvres, the most decisive operations, and if they are not the work of an exceptional man, of Frederick or of Napoleon, you will find them inspired by passions rather than by calculation. What would the war of 1870 have been without the hate the Germans bore us?

Looking at war from this point of view, Clausewitz attaches but little importance to the form of the operations. It is true that he wrote one of his best chapters on the secrecy necessary for

[1] Clausewitz derived his doctrine from Scharnhorst, and shares it with his contemporaries, Gneisenau, Müffling, etc.

manœuvres, but he despises the geometrical element in war—that is to say, the form of the operations. He wants men to march straight on the enemy's principal army, so as to have the decisive battle as soon as possible. According to him, the object of turning movements is to increase the results of victory, not to procure it. To win, it is better to march straight on the enemy with all forces assembled than to divide the army up beforehand, with a view to manœuvring. The essential thing is to pursue vigorously as soon as one has gained the victory.

Principles which appear most firmly established find no favour with him: he cares little for guarding his line of retreat *if he is the stronger*; in this he follows, if not the written doctrine, at any rate the practice, of the victor of Marengo, of Austerlitz, of Jena. He makes fun of bases, and interior lines of operation, and other things that Bülow and Jomini introduced into the strategical vocabulary.

He continually calls to mind the dangers, the uncertainty, the incidents, or the *friction* amidst which decisions have to be taken in war. "War is the domain of danger," "war is the domain of uncertainty," he repeats, and at first it does not seem as if we should become more skilful in leading troops through reading such aphorisms, but if we allow ourselves to be imbued with them we become impervious to the fads of system-mongers; we avoid formal rules and depend on initiative; we only accept simple principles and simple dispositions, such as may

survive amidst the friction, the uncertainty, and the danger; such as seek for success in the employment of force rather than in a combination of angles and lines.

The army which beat us in 1870 was the work of William, Prince, King and Emperor. For half a century he had devoted himself to forming it, to imposing on it the cult of the initiative and of energetic action. This primarily is why it won. Add to this a pleiad of generals provided with a simple and solid doctrine, and you will have the measure of what Clausewitz did for his country. In Moltke's operations of 1866 and 1870 we find the strategy which would naturally be produced by the preaching of Clausewitz.

In the work of this great military writer there is a whole section of which men do not always seem to grasp either the truth or the important bearing. It is that which treats of the defensive. We should be mistaken, of course, if we saw in Clausewitz any sort of preference for the defensive; he knows better than any one that the offensive alone procures positive results; no one saw better or understood better what the offensive at its highest point of energy can give; but he also saw that the defensive (to employ his own expression) is often necessary to arrive at victory.

It is rare that an army, even if it is very superior to its adversary, can act continually on the offensive, to do so it would have to be engaged with completely inert or incapable enemies; and again there is no manœuvre in which at any rate a part of the army does not avoid battle, either by

remaining motionless or even by retiring. We have seen that in a general way Napoleon forbade his marshals to compromise themselves with the enemy before the time of the general engagement. And the result always was that some were obliged provisionally to abandon offensive action. The orders to Lannes in 1806 definitely laid down that he should retire if the enemy advanced against him.

Napoleon had occasion to regret the few occasions when he did not act in the same way. In 1800 he did not prolong his halt at the Stradella, and engaged under unfavourable conditions at Marengo. In 1813 he made Oudinot and Ney assume the offensive at the same time that he himself attacked in Saxony; thus the failures of Gross Beeren and Dennewitz were the prelude to Leipzig. The conduct of the Allies, which was regulated on the Reichenbach plan, is perhaps the most instructive and the most profitable example, both for its theory and for its practice. It did not demand superhuman genius, and for the rest it was directly inspired by the principles that are of the very essence of war. Everything in war is resolved by force, by battle. On the day of battle no battalion, no battery must be missing, and all the troops must be as intact as possible. The different parts of the army should always make it their object to concentrate on one single battlefield, and up to then to avoid any partial encounter in which victory would not be certain. The three great armies of Bernadotte, Blücher, and Schwarzenberg are therefore about to converge in the region of

Dresden and Leipzig to fight a general battle there. Each of them is to attack vigorously if it encounters one of the French marshals or a secondary army, but is to refuse battle every time that it sees Napoleon and the bulk of the French forces approaching.

Thus we have a combination of the offensive with its opposite in order to attain a general victory. And if we think it over, if we eliminate the prodigies of skill that Napoleon accomplished in his manœuvres, we find at the bottom of it all this pre-occupation of concentrating all his forces for a general battle, and of not compromising any division in partial fights of which the issue was uncertain. In this connection, the instructions given to Murat in 1805, to Lannes between October 8 and 12, 1806, should be compared with the Reichenbach plan.

Even in the most offensive manœuvre, there are nearly always operations which have the opposite complexion, because one is obliged to *preserve* the forces intact for battle. The defensive in the fight, the attitude of expectancy or retreat in the operations, are means of preservation, and it is easier to preserve than it is to acquire. If we doubted this, it would be enough to remember that a weaker body face to face with a stronger generally has recourse to non-offensive proceedings. Clausewitz affirms most reasonably that if it is the offensive alone that can give positive results, the opposite allows one to make sure of negative results at a less cost, and that it is often necessary to have recourse to it.

It is by meditating on all the events of 1813, those very events by which Clausewitz himself must above all have been inspired, that we thoroughly understand the qualities attributed by him to the defensive: "The defensive which preserves is easier than the offensive which desires to acquire." "The defensive is the stronger form with a negative aim; the offensive is the less strong form with a positive aim."

Simplicity in conception, energy, ardour, passion, opportune employment of the offensive, this, and no more, is the doctrine of Clausewitz.

§ 2. MOLTKE'S MARCH STRATEGY

In 1813 the Allies had raised 700,000 men, of whom 510,000 composed the field army. Napoleon opposed them with 550,000 men, of whom 450,000 were in the field army. In the month of August 1870 the Germans invaded France with 512,000 men against 240,000.

The effectives in use were no greater in 1870 than in 1813, and the operations might have been directed according to the same principles and methods as in the Napoleonic wars. However, this was not the case.

We will not speak of the operations undertaken by the French. Directed by generals who, in accordance with national prejudices, had had no other teacher than their own experience, and did not dream that to move 250,000 men dispositions have to be combined, such operations do not presuppose any directive ideas worthy of examina-

tion. Therefore we will stick to the German operations.

Under the influence of Clausewitz they diverge palpably from Napoleonic methods; and, moreover, the density of the network of roads favours the adoption of a new system of marches. In 1805, when Napoleon went from the Rhine to the Danube he found four roads on a front of 90 kilometres; in 1870 there was available, on the average, one independent route to every 8 kilometres of front. These circumstances, added to the ideas taught by Clausewitz, determined the methods of the Prussian grand tactics.

Clausewitz, who reminds men continually of the dangers, the uncertainty, the friction amidst which decisions are taken and operations are carried on, advises men to avoid everything that is complicated, fragile, or ambitious. His disciples will deliberately avoid the wide Napoleonic manœuvres; they will seek neither to prepare turning movements from afar, nor to combine their marches skilfully so as to conceal their object or to be able to change their dispositions according to circumstances. In studying the operations and projects of Moltke we have not to admire refinements such as are presented by the operations of 1800 or of 1806; everything is of the most extreme simplicity. The Prussian armies of 1866 and 1870 march straight on the enemy in the direction in which he is reported. Their march is merely organised with a view to a straightforward battle. "In every march," said Moltke, "two considerations must be taken into account;

the reduction of the columns to a minimum of depth, and facility of deployment for the fight."

This facility demands that the columns should be multiplied as much as possible. "It is a mistake to think that one is concentrated when the whole army corps is marching on the same road. One loses more in placing the troops in depth than in disposing them on the line of the front, because two divisions marching parallel at an interval of 8 to 10 kilometres one from the other, support each other better and more easily than if they followed each other."

This is the only point of view in which Moltke places himself in order to organise the march of his armies; but in practice he often forgets the principle we have just quoted, and excessively diminishes the number of columns. It is thus that in a memoir of November 16, 1867, embodying one of his numerous plans of campaign against France, he declares that *the most rigid concentration is necessary* during the marches, and he gives but one road to every 100,000 men. So that deployment may be possible in the event of an encounter, the depth of each army corps has to be reduced to 15 kilometres, which demands special formations very punishing to the troops. Also, according to Moltke, one must only make very short marches and bivouac constantly. This method involves many drawbacks.

In a memoir drawn up in the spring of 1870 Moltke wrote again à propos of the first marches that are to follow concentration:

"*The operation will simply consist in this—that*

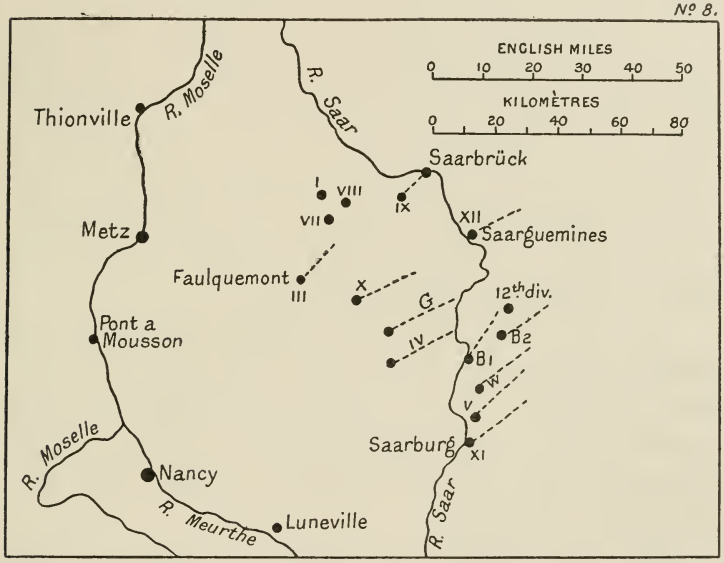
we shall make a few marches on French territory in as massed an order as possible until we meet the adversary's army to fight it."

In these few lines Moltke's grand tactics are summed up. The various projects he drew up from 1859 on, always show bundles of columns in which the intervals vary from 5 to 7 kilometres.

In 1870, during the march from the Sarre to the Moselle, on August 10 or 11, for example, the front of the assembled 1st and 2nd Armies is 35 kilometres to eight army corps, of which six are in first line. It is a density of six men per running metre of front, a fighting density; the duration of the concentration is reduced to nothing, but deployment will take at least six hours. One may be surprised that Moltke, having advocated columns of divisions, here forms columns of army corps in order to over reduce the front. The density of these formations and the alignment of the heads of columns make evolutions difficult. On August 11, for example, Moltke has no information about the enemy, and his seven first-line corps are deployed on an arc of which the very shallow convexity is turned to the front. If the enemy is reported between Metz and Thionville, the three corps of the left aligned on Metz cannot come up in time; if the enemy is reported towards Dieuze, the three corps of the right will find themselves piled up on one and the same road.

On August 25 the Army of the Meuse and the 3rd Army are marching on Rheims and

Châlons. Like the above, they have six corps in first line and two in second line. The front is turned towards the west. On the information of MacMahon's movement towards Montmédy, a sudden change of direction has to be made in order to march to Sedan; and nothing can be more painful than this change of direction. Three



corps find themselves crowded up one behind the other; each corps hampered itself and the one following, which is quite close up. The four other corps remain far to the rear and will only rejoin at Stonne. All this is only disentangled by making excessive demands on the troops.

Let us carry ourselves back to the change of direction carried out on October 13, 1806, by the Grande Armée in order to concentrate towards

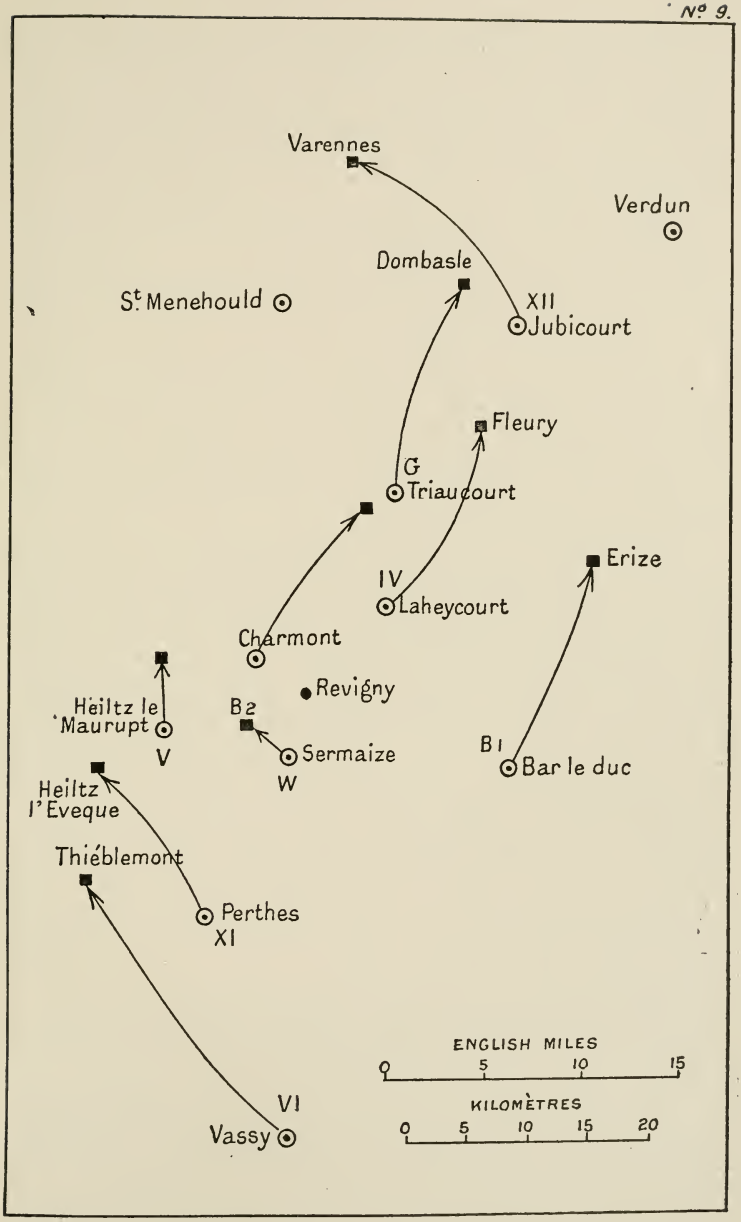
Jena, a movement so simple and so natural that, except for a word in an order to Soult, there is no need for the Emperor to mention the itineraries. Truly the grand tactics of Napoleon are superior to those of Moltke. The latter only consider the case of a battle in which the enemy has placed himself precisely on the line of march; they contain no provision for the unforeseen.

It will be contended that Moltke did not manœuvre with army corps in one army, but did so with armies. In 1866, as in 1870, he divided his forces into three armies, but does he use them to manœuvre with? In the examples we have just quoted there is no question of an isolated army; it is a case of armies glued together which form these bundles of parallel columns.

It is the 1st and 2nd Armies together that march on August 10, 11, and 12, from the Sarre to the Seille; it is a group of three or four armies that we see in the projects of 1859 to 1870 directed in a narrow bundle of parallel columns on Metz or Nancy.

There is certainly one possible corrective to the rigidity of the dispositions taken by Moltke: it is exploration. Deployment under the best conditions being assured so long as the army marches in the direction of the enemy, it is, and it should be, sufficient that it be kept constantly informed by the cavalry.

In his instructions to the commanders of the larger formations Moltke defines the principles of exploration; as often as possible they are to employ patrols of officers, composed of a small


Varennes
Verdun
Dombasle
St. Menehould
XII
Jubicourt
Fleury
G
Triaucourt
Erize
IV
Laheycourt
Charmont
Revigny
Heiltz le
Maurupt
V
B2
Sermaize
W
B1
Bar le duc
Heiltz
l'Eveque
Thiéblemont
Perthes
XI
VI
Vassy
ENGLISH MILES
0 5 10 15
KILOMÈTRES
0 5 10 15 20

number of horsemen, and only quite exceptionally large units, such as brigades or divisions. Its mission is to make known exactly the position of the enemy, and usually will only succeed in this by turning it.

This method of exploration differs essentially from that which Napoleon organised in 1805, in 1806, in 1812; its rôle is more strictly limited, its means less varied.

The principles laid down by Moltke are little observed in practice. He is not kept constantly informed, as he counted on being, and on August 11, 15, and 17 his ignorance about the enemy is almost complete.

The fault lies in himself, because he leaves the cavalry in the hands of army commanders, or even of army-corps commanders, without laying down for it any well-defined task. He expects information to come to him instead of having it sought at some given point. The exploration cavalry is, as we have seen, the instrument of the commander-in-chief; it is he who causes it to act; it only furnishes him what he asks of it. There is perhaps no part of the army that feels and expresses so clearly whether the general has ideas and a firm and definite will.

§ 3. MANŒUVRE IN THE PLANS AND OPERATIONS OF MOLTKE

It is difficult to form an opinion on Moltke's doctrine, so many are the contradictions between his acts and his writings, and even between one of his projects and another. Sometimes one sees

him executing or projecting movements in dense and rigid order, as we have just indicated; sometimes he speaks of operations which presuppose bold and wide movements; but in this case he always confines himself to very general indications. Moltke, like the Allies in 1813, often organises three armies, to which he seems to wish to give convergent directions; but in reality he departs widely from the examples of 1813.

The characteristic trait of the operations of October 1813, as far as the Allies are concerned, is the convergence of the three armies starting from Bohemia, Silesia, and Brandenburg on the central point of Leipzig, and their engagement in battle before they had been united. Moltke does not act in that way; his armies only move separately when they are far from the enemy, and always join closely together before attacking.

It is rather curious that the inverse reputation has been made for him; for many historians the difference between Napoleon and Moltke consists in this—that Napoleon completed his concentration before battle, and that Moltke fixed his point of concentration behind the enemy's front. This opinion seems to be the exact opposite of the truth.[1]

Let us recall to mind Sérurier's manœuvre at Castiglione; the movements projected for Soult on the Iller; for Davout at St. Pölten and Jena; those which Ney carried out at Eylau and at Bautzen; the converging movements of Napoleon

[1] Unless Moltke always saw all his projects countered, as has been suggested with some probability.

and Davout at Eckmühl. Let us compare them with the operations of Moltke in Bohemia. From the opening of the campaign the Prussian forces were separated into two masses, of which one was in Silesia and the other in Saxony—a solution the formalists criticise and which we should admire unreservedly. Like all fine operations, Moltke's offensive in 1866 is audacious in appearance and in reality without danger. If the Austrians had wished to bring superior forces against the Crown Prince, they ought to have been crushed in Bohemia by Frederick Charles. In the contrary case the Prussian armies would have concentrated at Gitschin. On June 30 they are still a long march away from each other, but as we have seen in speaking of the battle, Moltke completes the concentration before passing on to the battle, and only attacks on July 3, with all his forces, not assembled (in the Napoleonic sense), but closely concentrated for the last three days.

There is no question here of declaring Moltke inferior or superior to Napoleon or to Blücher, but of characterising his proceedings with reference to those of the Napoleonic period. War has a practical object—victory; and the triumphs of Moltke amply demonstrate the value of his methods. It is all the more important to define them correctly and not to see in Moltke's tactics the triumph of great turning movements.

The distribution of the German forces into three armies for the campaign of 1870 presents a singular analogy with the dispositions of the Prussians before Sadowa. In one case, as in the

other, the principal army is in the centre (Frederick Charles); a small army of two corps to the right accompanies it like a satellite, and does not seem destined for any important manœuvre; to the left, the army of the Crown Prince debouches almost at right angles to that of Frederick Charles, but is to join on to it closely before the battle.

In the commander's mind, we have said, wing armies have not got to make great turning movements; but they are none the less destined to carry out a manœuvre, for they are to outflank the enemy. What Moltke seeks, in conformity with the doctrine of Clausewitz, is tactical success; and he calculates that he will obtain it with less risks by outflanking a wing of the enemy's army than by turning it. At Sadowa, Prince Frederick Charles' initiative, it seems, directs the effort to the opposite side to that on which Moltke wanted it; on the Sarre it is the disobedience of Steinmetz that causes the projected manœuvre to fall through.

Without doubt Moltke is persuaded that since the last campaigns of Napoleon a movement of very wide scope is exposed too soon, that even for an outflanking movement one cannot hope for secrecy if the corps charged with its execution advances prematurely beyond the centre; the frontal battle must be joined before the attack on the wings is unmasked. Thus the principal army (that of Frederick Charles), although it is to attack first, must wait, and avoid engagement so long as the Crown Prince is not yet within distance to come into action; and the subordinate armies may not advance beyond it till that

moment. This is the manœuvre that Moltke neglected to explain to Steinmetz, and Steinmetz, having less profound and less correct views than his master, wants to march on and attack first. Add to this that he encroaches beforehand over the zone reserved for the Army of the Centre, a thing which cannot be explained by any erroneous conception of the operation.

We must not fail to observe that this manœuvre of Moltke's projected for Sadowa and for the Sarre excludes, like Napoleon's project, all encounters hazarded before the decisive battle. Of necessity there are partial actions like those of Froeschwiller; the secondary theatre of operations in Alsace must be thoroughly cleared, but the Crown Prince disposes of greatly superior forces for this mission. He is safe from risks.

Moltke's manœuvre does not involve the idea of fixing the enemy by a partial fight any more than does Napoleon's; non-offensive methods, a state of expectancy, and even retreat are as necessary to one as to the other. This is what Steinmetz did not understand on his own account in 1870.

In Moltke's plans of campaign one finds a number of operations projected following a single type very different from the preceding. They consist of engaging the fight on two fronts forming a pronounced angle, and of which one front is marked by an important watercourse.

Whereas Napoleon waging a war that was all movement only employed watercourses to mask his movements to and fro, Moltke makes of them defensive positions.

Does he imagine that the French have violated Belgian neutrality? Then an army will await them on the Lower Rhine, and another will attack their right flank, debouching between Treves and Coblentz.

If they advance from Metz on Cologne, they will be checked on the Moselle and taken in flank by an army which will debouch from Mainz and Rastadt.

Finally, if they march from Metz and Strasburg towards Mainz and Frankfort, Moltke will on this side oppose them but feebly. He gathers the bulk of his forces on the left bank of the Rhine close to the Moselle, and it is from there that he will take the offensive.

Is it a question of war against Austria when the King of Prussia is not willing to attack? Moltke will accept the contest on the Elbe. If the Austrians advance by the left bank of this river, a weak detachment of the Prussian army will stop them between Wittenburg and Torgau, the main body will attack their left flank in the region of the Mulde.

If, on the other hand, the Austrians march on Berlin by the right bank of the Elbe, the Prussian army will debouch between Dresden and Torgau to take them in flank and rear. What is to be noted here is not only the form of this manœuvre, which is new, but the extraordinary audacity that inspires it. Moltke makes frequent use of flank and rear positions. He places himself in situations where, once battle is accepted, the beaten side will lose all. But he has confidence in

his strength; it is not possible for him not to win, and he wants to put the enemy into situations from which there is no way out.

Moltke is often misjudged; men see in him the cold and accurate calculator; they fail to recognise his unlimited confidence and boldness, the true hall-mark of great warriors. He did not become victor at Sadowa, Metz, and Sedan with the aptitudes of a mere head of a department. Moltke has the supreme gift of the great captains—confident boldness. He takes naturally, and with unaffected calm, decisions of remarkable audacity. No one has surpassed him on these lines. He does not believe in defeat. He does not hesitate to lose his own communications in order to cut those of the enemy; for him there are no doubts—the question is never asked; for it is the enemy that will be beaten. It does not enter his head to preserve his line of retreat on Berlin, since he must win; the essential is to block the enemy, to push him back against the Rhine or the Elbe, for his destruction is certain.

The man capable of such conceptions remains unshakeable amidst dangers, and immediately and calmly takes the greatest decisions in the most critical moments. If he places imperfect methods at the service of his strategic ideas, he at least impresses on the operations a correct and strong direction; he leads his armies to the goal without allowing himself to be distracted by secondary questions. At every moment he discerns immediately the most important objective against which the operations must be directed.

It is thus that on the night of Gravelotte, when the battle appears lost, or at any rate undecided, and when the great Bismarck openly gives voice to the opinion that the offensive should be renounced, Moltke gently declares that he is about to give the order for an attack on the following morning. And as soon as victory is assured and Bazaine has retired into the fortress of Metz, Moltke does not lose a moment in ordering the march on Paris. These are the master qualities, audacity and decision, that one finds in his acts as in his writings; they are those to which the great victories are due.

§4. MOBILISATION AND CONCENTRATION

Nineteenth-century Prussia introduced into war two operations which were almost unknown in preceding ages: mobilisation and concentration.

In all ages it was necessary to increase the effectives so as to undertake a campaign, and to supply them with various objects with which regiments were not furnished during peace time: provisions, ammunition, vehicles, etc. This is what the Germans call "making mobile," *mobil machen*, whence the name *Mobilmachung*, which was translated into French as *mobilisation*.

Prussia, which for a long time had passed regularly from a peace footing to a war footing by incorporating complementary trained men, did not fail to regulate this mobilisation; the order and the duration of the different operations were fixed in every detail. The Prussian Great

General Staff, which never ceased to prepare for possible wars against Austria, France, and Russia, constantly studied plans of campaign and endeavoured to settle at least the initial disposition of the army, the *Aufmarsch*.[1] This is what Napoleon called the *assembly* of the army, and what we have most improperly since called *concentration*.

As soon as railways were able to be of some use in concentration, the Great General Staff under Moltke's direction studied their use. From 1852 on, transport and concentration schemes were constantly worked out and kept up to date; every improvement in railroads was made use of to accelerate movement. The War Office, for its part, gradually shortened the time of mobilisation. The progress made was prodigious; the Prussian army, which, according to the schemes of 1859, could only be concentrated on the 35th to the 42nd day, was in 1870 ready on the 19th day. And this result seems all the more astonishing when one knows the small output of the German railways at that time.

During the earlier studies of mobilisation and railway concentration some officers thought of combining the two operations. They considered that to wait for the completion of mobilisation before beginning the transport work of concentration was needlessly to delay the arrival of the heads of the columns in the frontier region.

[1] *Aufmarsch* does not mean either deployment or concentration. It is the operation accomplished when the elements of a column separate and group themselves at wide intervals in waiting formations.

They proposed, therefore, first of all to transport the troops at peace strength, and to make the reservists join them later. This solution was discarded, and Prussia had no reason to repent of it. The great simplicity of its transport system contributed greatly to success in 1870. The French, on the contrary, first assembled their troops on a peace footing in Alsace and Lorraine, and only then began to send them the reservists, provisions, ammunition, articles of equipment, and vehicles necessary for passing to a war footing. This transport work, undertaken without preparation, resulted in incredible disorder. Whole trains of supplies and ammunition were forwarded to Metz without *personnel* to unload them. The stations and the lines were soon encumbered with packages and trains to such an extent that movement became impossible. It was necessary to stop the transport of *personnel*, and 200,000 reservists had to be kept at the dépôts. This was one of the chief reasons for defeat. At the same time the troops, who had been sent to the frontier without the necessary *matériel* which it was intended should follow them, complained of lacking everything. The moral effect was disastrous.

Since 1871 mobilisation and concentration have been carefully studied in all armies; so carefully, that many officers engaged in this work see in it the whole of preparation for war and lose sight of operations properly so called.

The concentration-transport is regulated according to the plan settled for the first dispositions;

it may be modified and undergo variations. These latter are carried out by mixed commissions established at what are called regulating stations.

The zone in which the detrainments take place during concentration is more or less distant from the frontier, according to the plans of the higher command. It will be very near the frontier if we can count *both on numerical superiority at the beginning and on having a great start* in relation to the enemy. Then we can assume the offensive and attack him before he has finished his concentration.

In every case detrainment and concentration should be made safe from all interference by the enemy. If we cannot count both on initial superiority and on a great start in transport, it is necessary to carry out detrainment so far from the frontier that the enemy cannot disturb it. Let us suppose, for example, that the enemy has a start of four days; we must then leave a distance of at least four marches between the most advanced zone of detrainment which we can attribute to the enemy and that which we adopt ourselves.

Other considerations assist in determining the zone of concentration. The general may choose to pull it back to await promised reinforcements. On the other hand, he may press his offensive if he is the stronger at the beginning and wishes to prevent the enemy getting reinforcements. If he has superior numbers and superior skill, he will try to carry the contest into a wide and easy zone in which he can manœuvre. If he is the weaker

and has no hope of reinforcements, he will seek a more restricted and difficult zone. If he wishes to fight defensively, he will fix his choice on a favourable position, etc.

All these conditions are taken into consideration when the choice of the zone of concentration is being made, and it is essential that it should suit the general's plans. It must not happen that he finds himself fettered by measures taken in spite of him, or obliged to wait when he wishes to assume a prompt offensive. Neither must he open the campaign by retreating before the enemy. A concentration effected at a great distance from the frontier offers drawbacks; it means abandoning part of the national territory to the enemy and leaving him entire liberty of action. But it may present advantages by obliging the enemy to entangle himself with the fortresses of the frontier zone, while we are able to give battle in a less confined region, in which it is possible for us to manœuvre, and do so more easily than the invader. The decision to be taken in such a case is the most momentous that can fall to the lot of a general. The faults he then makes are irrevocable.

CHAPTER V

WAR IN THE TWENTIETH CENTURY

§ 1. THE NEW CONDITIONS OF WAR

Much more important progress was made in things concerning war in the nineteenth century than in any other. Everything was developed, transformed, augmented, and not in weapons only, but also in means of subsistence, and above all, in means of communication.

The progress in armament has modified both the combat and the battle; but great as this progress has been, it has not been of a kind to transform war as a whole. Let us imagine an army endowed with the most modern weapons, but numbering only 200,000 men, and only having at its disposal the means of communication in use in 1806. The principles and procedure which it would then be suitable to apply to the operations of war would be practically the same as those of a century ago.

But it is quite different if we take into consideration the two great changes which most concern the movements of armies, *i.e.* progress in the means of communication and increase in effectives.

The invention and development of railways have led to manifold and considerable consequences: traffic and commercial and agricultural activity have reached an unheard of intensity. The production of food commodities and the closeness of the network of railways have increased this activity in huge proportions. In addition to rapid transport by rail, they allow of the mobilisation and revictualling of much larger armies than was possible at the opening of the nineteenth century.

The fact that armies can be supplied by rail has originated new conditions in war. These conditions, which are inherent in the use of railways, will no doubt disappear when further progress has brought the employment of road convoys into use once more.

We have seen that Napoleon put all his magazines and hospitals into a field fortress, that is to say, made them safe from the sudden attacks of local levies. For the rest, his armies were not so numerous as to be unable to live exclusively on the country. For all these reasons they never ran the risk (except in the case of having met with a complete disaster) of being deprived of the necessary resources.

A modern army is not similarly situated, so long as it is revictualled by rail. The troops are so numerous that the country in which they are operating can furnish but a small part of their supplies. Whereas in the nineteenth century it was usual to live on the country and keep the convoys in reserve, now it seems more natural to

depend entirely on a base of supplies, leaving the local resources intact to fall back upon, should the railway transport be interrupted.

Be that as it may, generals ought not to allow themselves to be ruled by this system of supply from the rear any more than they were in former days by their magazines. In this way the freedom of action of the troops is preserved, as at all times, by horsed or motor convoys, of which they should never be deprived.

"Lines of communication" have now a vital importance such as did not attach to them a century ago. The levies in 1813 operated on the rear of the French army with all possible success, and yet did not succeed in starving it. In a modern war, raids like those of Mensdorff, Thielmann, or Colomb would prevent the enemy's army from keeping the field. To interrupt the line of supplies it would be sufficient to seize engineering works or a few important railway stations, and to stay long enough to effect considerable destruction.

We say such expeditions would prove fatal to the enemy's army, but it would only be true if the usual blunders have been made and the important points are not protected. It is too often said that Napoleon's campaigns are ancient history, and we are so convinced of this that we do not even draw from them the most obvious lessons. If Napoleon's "lines of communication" were absolutely secure, it was so because his "dépôt" was safe from sudden raids. Let us imitate his example; let us protect our regulating stations and magazine stations on the different lines of

communication efficiently, then we shall have a security comparable to that of Napoleon. The enemy's cavalry may surprise one or two convoys, or make a few unimportant demolitions, but it will not dry up the sources of supply—and will not occasion us more than temporary inconvenience.

It is not a question of turning the towns in which the great stations are into fortresses of the first order, nor of engirdling them with a huge circle of detached forts without a continuous enceinte: on the contrary we must have a continuous enceinte proof against field artillery, but no detached forts.

The more important engineering works should also be protected as the Germans protected the bridges over the Rhine.

The new means of mechanical transport by which convoys on the road are replenished will deliver us from the tyranny of the railway. But, notwithstanding, railways for some time to come must be the normal instruments of evacuation and supply. For some time to come they will remain more vulnerable than ever, and would be the natural objective for all guerrilla troops, as well as for big bodies of cavalry. More than ever before, offensive operations will have as their objective the seizure or the menacing of lines of communication.

On the other hand, the immense armies mobilised nowadays will hardly be contained by the theatre of operations. In a Franco-German War, for example, if the troops are deployed between Longwy and Huninguen, their depth would be

six men to the yard; it would be three to the yard between Dunkirk and Montbeliard, or between Wesel and Bâle.

If Napoleon, in his sweeping manœuvres in 1800 and 1805, appears to have cast but a coarsely meshed net over his enemy, the armies of the future, it seems, will be more like massive and heavy rollers, crushing all that they pass over.

At first sight one is tempted to think that such armies are unsuitable for any manœuvre; one imagines them to be capable only of marching straight ahead into battle to the shock of brute force. This is what Von der Goltz writes:

"If an army acting on the defensive is not attacked directly in front, and if it is obliged to form front in an unexpected direction, it will find itself in the presence of considerable difficulties. . . . To turn this gigantic mechanism in an unforeseen direction is an operation the difficulty of which is increased by the depth of the concentration, and the wider the front, the longer this takes to do."

But we should not imagine that armies will be disposed in linear formations. Even though they occupy the whole breadth of the theatre of operations in sufficient depth to give battle, there can never be any question of uniform distribution. The general will hold larger numbers of troops at his disposal in certain zones where he means to obtain success at any price by developing and repeating his attacks. He will denude other regions where no decision is being sought for,

and he will see no capital objection to giving way here and there to the enemy.

And even this is but redistribution, the economising of forces for the battle which must not be settled or determined till the decisive moment. While the operations that precede battle are being carried out, quite another distribution may be needed—one which will not warn the enemy of the projected scheme, and which would permit us to check his; one which lends itself to variations, as the plan itself should do.

Firstly, the great units are grouped in such a manner as to allow of their being moved according to the turn of circumstance, in any direction and with the greatest rapidity. Such movements will habitually be carried out by road. The best methods of grouping and moving the large units called upon to manœuvre in this way are to be found in the Grand Tactics of Napoleon. These units will not be more unwieldy than the army of 1806 and 1807, while the network of roads will offer them greater facilities for movement. This network gives for the most part one carriage-road to every three kilometres of front. Thus an army corps of 30,000 men, which on a single road would form a column of 25 to 30 kilometres in length, may be distributed without inconvenience on several roads. It will be enclosed in a 10-kilometre square; it becomes a true pawn on the chessboard. Nothing is easier than to move it without loss of time, to concentrate it rapidly on its head or on either flank, and to make it change direction.

An army composed of a group of corps massed

in this way can turn about, concentrate, or deploy without difficulty.

Bodies of cavalry and cyclists make it possible to occupy essential points more rapidly, and open the road to the armies. They can be used either as mobile reserves or as organs of offence capable of suddenly extending the range of an outflanking attack.

But these are not the only means that modern armies have at their disposal for promptly modifying the distribution of troops in the theatre of operations. In 1859 and 1870 army movements were carried out by rail but slowly, as they were badly organised. The railways of to-day offer far more valuable assistance now that we are accustomed to use them with method and science. They lend themselves to rapid movements, and allow of the transport of an army from one end of the theatre of operations to the other in a few days. The long parallel railways that follow the course of the Rhine would enable the Germans, for example, to make rapid transportations between Strasburg and Cologne or Aix-la-Chapelle. They might, after having to all appearances piled up their troops and their efforts at one extremity of the theatre of operations, after having repeated their attacks and thus determined the concentration of our forces on one of their wings—they might, I say, suddenly bring their principal strength to bear on the opposite side.

One is tempted to exaggerate the ease and rapidity with which transport is carried out by rail during operations, but one often falls into the

opposite extreme. It takes two days to transport an army corps by a double line, and it is possible to convey as many army corps in two days as there are lines giving on to the zone in which it is intended to operate. But troops conveyed by a single line are detrained on many platforms and sidings, often very far apart. A day, or even more, must be allowed to reassemble the men after detrainment.

Finally, at least two days are needed to prepare for such transportations, but usually the movement would have been worked out and the orders given for it long beforehand. When one knows for certain what use can be made of railway transportation and the resources of the network of rails, it only remains to develop these in the sense desired, and so to facilitate all possible manœuvres in accordance with studies made in peace.

Armies appear more cumbersome to move, but the means which they have at their disposal for movement are more effective.

Also, though the number of troops seems to make it more difficult to exercise command, generals dispose now of infinitely greater facilities for transmitting orders than in the past.

Telegraphy, in admitting of command from a long distance, has completely changed the conditions of war. What a difference existed between the higher command of the Prussian armies in 1870 from the General Headquarters at Versailles, and that of the French armies, or of the Allies, in 1812 and 1813!

Telephones, wireless telegraphy, and visual sig-

nalling have come to reinforce the telegraph; cyclists are valuable for the transmission of orders and reports at short distances. Automobiles have almost dethroned the telegraph; they carry with a rapidity only comparable to that of telegraphic transmission, not only written orders, in which no error due to transmission is to be feared, but also officers, and even the general himself.

Thus, in communications, as in transport, the new difficulties are largely surmounted by the new means of action.

It is the same with exploration. If the extent of ground occupied by the armies, as well as the efficacy of infantry fire, makes cavalry exploration almost impossible, dirigible balloons and aeroplanes will soon replace it, and will perhaps furnish intelligence that cavalry would never have been able to procure.

To sum up, it is with war as it is with battle, operations will be as varied and as supple as possible; they will admit of, and will demand, as much skill as in the past, so long as we make use of all the new means which allow us to gain intelligence, issue instantaneous orders, execute rapid manœuvres.

The last transformations of war only accentuate the evolution accomplished since the middle of the eighteenth century.

1. The battle was formerly independent of the operations: since Napoleon's day it has been intimately linked up with the operations; it now absorbs nearly all the operations.

2. The line of communication, which was so

little thought of until Valmy, became very important in Napoleon's day; it now has assumed vital importance.

3. Following a natural law, recent industrial and military progress has favoured the defensive in frontal fights; but the offensive is more potent in imposing battle and in forcing decisions to one's advantage, for the assailing army occupies the whole theatre of operations and sweeps all away on its passage.

§ 2. THE APPLICATION OF PRINCIPLES TO MODERN WAR

It is said that the great principles of war are unchangeable; that they are simple common-sense truths, and stand for all time. We should not exaggerate the import of this assertion: the great principles which were true yesterday will also be true in the future, though many among them will be out of date and will not be susceptible of current application. Others no less eternal, but of which no one had thought, will perhaps make their appearance.

Rules of conduct deduced immediately from principles will even more certainly fall into desuetude. Let us review those which Napoleon laid down, and let us see how many of them are still applicable to-day. The unity of the line of operations was no longer respected in 1813. Directly revictualling was done by rail it never could matter again, because one line served four or five army corps.

The unity of the line of operations had a double

importance in Napoleon's eyes: it facilitated the protection of magazines and convoys, and it assured unity of action. As far as the protection of convoys goes, it can be assured in other ways in the future. As for unity of action and the assembly of forces, they are afforded as much security by the general conditions of modern war as the unity of the line of operations afforded them in the past.

In the days when an army in active operation covered only 50 or 60 kilometres in width, one might have been tempted to form two armies on such a theatre of operations as is Western Germany, and to assign to these armies separate objectives and independent generals. In future the troops mobilised will hardly be contained in the whole width of the theatre of operations. How, then, can they not be under one single commander, and how can he fail to keep them united?

The armies of the two belligerent powers will face each other, barring from side to side the enclosed space in which they are about to fight. They will march towards each other to engage in battle, and it is difficult to think that in the future there can be any objective save this encounter. Even if they wished it, they could not neglect the army of the enemy in order to occupy a town or a province.

Formerly it was necessary to remind men and to plead endlessly for unity of command, unity of action, the assembly of forces, the seeking to bring about a battle without thought of secondary

objectives. In future it seems that all these dictates of the great masters will have become useless.

And yet they have not ceased to be correct; but their applicability is presented in such new guise that one scarcely recognises it.

If the fact that armies are deployed across the entire width of the theatre of operations with the depth requisite for action excludes the tendency to division, it will, on the other hand, give rise to many other temptations, which one will still resist if one is imbued with the old principles.

When it comes to moving the masses of troops which a European war would bring into play, one thinks first of deploying them in a continuous homogeneous line of almost continually equal depth, with which one thinks one would, without further combination, be in a situation to give battle. Else, giving to an assembly of two millions of men not the depth, but the dimensions of the grouping of six army corps in the Napoleonic wars, we pile up these masses in a narrow space where they would offer an easy prey to the adversary.

We should not act thus if we remembered the profound meaning of the Napoleonic principles. If we want a united army, it is not in order to get men shoulder to shoulder, but to enable the general to employ them all in the same action in the manner which suits both his plans and the circumstances. This is what the old principle, "Keep an army together," means to us to-day, and its

application exacts as much forethought and talent as it ever did.

If Napoleon wanted a single commander, a single line of operations, it was in order that all his forces might be moved by a single will, directed by a single mind, towards an identical objective. It is not enough to have a commander-in-chief and an army deployed without intervals; a master idea, according to which the army is to act, is also necessary. Everything must be co-ordinated, all movements should be linked up and combined with the view of common action.

From another point of view there is also reason for ensuring the union of forces. People often neglect what Clausewitz calls the economy of forces "in time"—that is to say, they decide to bring all the forces at their disposal to bear in the same theatre of war, but *successively*. Clausewitz quoted the example of Austria in 1796; we have a still more remarkable one in 1870. A professional army, comprising but a small number of reservists, was crushed at Froeschwiller and Gravelotte. Another army, mainly composed of reservists, was offered up as a holocaust at Sedan. These two armies numbered 300,000 men. There were still at the dépôts 296,000 men of the active and reserve armies. From August 15 there were 100,000 *gardes mobiles* under arms who by September were ready to march. Thus, by refusing to fight in the middle of the month of August, it would have been possible to assemble 600,000 or 700,000 men by the first day of September. On the pretext that

they were of unequal value the troops were made to fight in detail.

"We must," said Colonel Foch in 1900, "*make use of all our troops, whatever their kind.*" What folly to reserve the less good men for the despairing struggle of the last hour! Would not the *mobiles* of Coulmiers, Bapaume, and Villersexel have fought more usefully side by side with the army of Chalons?

In future, as in the past, we must employ all the living forces of the nation, employ them in common action together and in the same battle. We must not put forward excuses about the mediocre quality of certain troops, for there is no battalion which we shall not be obliged (and glad) to fall back upon in the hours of despair.

§3. THE OFFENSIVE AND THE DEFENSIVE

It would be absurd to think that one could fight without hitting out. The attack is the normal mode of action in war.

No one should be allowed to command armies who is not disposed by nature to take the offensive. Far from fearing the struggle, a general should desire it, be eager to fight; he should not allow himself to go to the battle, he should march there resolutely, fully conscious of his actions, with a free and active spirit directing his will.

There is nothing in this, it seems, but what is simple and natural, and yet nothing is more rare. "It is difficult," said Napoleon, "to form any exact idea of the strength of soul needed to deliver with a full appreciation of the consequences one of

those great battles on which the fate of an army or of country depends. Therefore it is very rare to find generals eager to give battle."

A general who was not of this temper, and who feared the dangers and responsibilities of battle, would be condemned to irresolution, to immobility, or to counter-marches. For such a man, the attitude called defensive would be the outcome of his timidity and his hesitations. This is not a halt or a retirement decided on in full knowledge of the situation, by a general worthy to command and impatient to resume the offensive at the first opportunity. Such a man would find it easier to attack than to act on the defensive. In postponing a battle he does it in spite of himself. Perhaps it is dangerous to recall the fact that great leaders have not always acted offensively; it may serve timid men as a pretext for clinging to the defensive themselves. But it must nevertheless be stated: if it is necessary to assume the offensive in the operations taken as a whole and in the final phase, it is often only possible to operate by postponing the fight for a certain time, and at certain points.

Napoleon gave an example of this in 1796, on the Adige, and again in 1813, when he halted on the Elbe. He gave an example of this even when taking the offensive in 1806, and in 1807, when he ordered the army corps nearest to the enemy to refuse to engage while awaiting concentration. Blücher, in 1813, retreated when he thought it necessary as a means of assuring the success of the concentric advance on Leipzig.

But in repeating this statement we must still insist on the fundamental difference between the deliberate retreat of a Blücher and the inertia of a Brunswick or a Bazaine.

The most serious faults in war are passivity and stagnation. If they translate themselves into the defensive—that is to say, into the expectation of the blows of the enemy—they also manifest themselves, in a slighter degree, in what may be called the passive offensive, that is to say, the advance without a reasoned plan of action. Generals incapable of carrying out any operation, of imagining any combination, sometimes push forward without any predetermined intention. They do not wait for the enemy's blows, but go to meet them, driven forward by public opinion, or by some vague feeling of the duty which numerical superiority imposes. This conduct has some advantage over the defensive, in so far as it does not leave the enemy in undisturbed leisure to combine his manœuvres; but it offers him an easy target since it opposes no will to his will.

This is the kind of offensive that many people think will be inevitable in the next war. We have seen that in this supposition there is a fundamental error: that the forces will be able to group themselves, if not as in 1806, 1807, or 1813, at least in accordance with analogous principles—in short, that one can and one ought to manœuvre.

To sum up, the most keen and resolute offensive spirit is necessary, though without any compulsion to a blind offensive. He who is not capable of

dominating events should remind himself of the Napoleonic precept:

"The worst decision in war is the pusillanimous, or, if you like, the prudent, decision. For a general, true wisdom lies in energetic determination."

It is impossible to calculate all the consequences of a movement. "One sees one's own ills, but not those of the enemy," and an offensive movement at least has this assured advantage—that it hampers the projected operations of the enemy, obliges him to face a new set of circumstances, to take hurried measures, often to commit mistakes. "All initiative," says a German writer, "however defective, is capable of checking the projects of the enemy and of tiring out his troops."

There is no more burning question than that of the offensive: we are unwilling to demonstrate that it should not be adopted invariably and in all places; and yet, while pointing out the advantages of the offensive, we must not fall into the opposite extreme. How many times has not the offensive been undertaken rashly, in insufficient strength, and the issue been a defeat, a retreat, an untimely check quickly followed by disaster? Examples are familiar to all; they are not pondered over enough. Mack coming from Vienna to Ulm, fearing to advance farther, yet unwilling to retreat, and thus allowing himself to be taken. Brunswick advancing into Thuringia, then feeling his inferiority, marking time there, retreating too late, ending in Jena. Napoleon III. leading his army corps to the Prussian frontier to fight the

ridiculous engagement of Saarbruck; then, feeling all the superiority of the enemy, unable to advance, ashamed to retreat, abandoning himself to inevitable defeat.

As these examples show us, it is not offensive action after contact is obtained that destroys armies; it is the initial movement, or rather, the too advanced assembly of the army. Mack, Brunswick, Napoleon III., did not act offensively; they advanced too far forward to begin with, and assembled their armies too close to the enemy without taking into consideration that they were unable to attack.

It is very rare, in fact quite exceptional, that a general has ever repented of taking the offensive with resolution and of attacking with vigour. It is very common, on the other hand, that generals should first advance their army, and then, at the moment when they expect to meet the enemy, perceive that they are much less strong and that they will be crushed.

In the European war of the future the troops will be detrained in what is called the zone of concentration. The preceding observation is applicable to the choice of this zone. It goes without saying that one should not make war if one cannot sooner or later count on having superiority. One would assemble the army nearer to or farther from the frontier, according as one expects to be more or less quickly in possession of this superiority.

Thus one arranges for detrainment close to the frontier if one believes oneself to have

superiority from the beginning, and all the more so if one believes one will only have it *at* the beginning. It is then to one's interest to assume the offensive as quickly as possible. On the other hand, a general who believes himself to be inferior at the outset and expects to be stronger at the end of a few days, assembles his army far from the frontier if only he can find an area at some distance from the frontier which would be suitable for his plans. He shows his judgment in the choice he makes of a zone of assembly for the armies. He manifests his greatest qualities in the decision and vigour with which, once the moment has come, he passes to the offensive.

"At the outset of a campaign," said Napoleon. "one must thoroughly consider whether one ought or ought not to advance; but once one has assumed the offensive, it must be maintained to the last extremity. . . . The whole art of war consists in a well-reasoned and extremely circumspect defensive, and in an audacious and rapid offensive. . . . War can only be made with vigour, decision, and a constant will. One should not fumble or hesitate. When one determines to conquer, one can communicate one's energy to all. A rapid march heightens the *moral* of the army, it increases the chances of victory."

And, above all, the general must have a will, work on a plan. "One only accomplishes great things when one knows how to concentrate oneself entirely on one object and to march across all obstacles to one goal."

One will attain it by battle, because "no result

can be arrived at without battle." Once the battle is joined, no matter what be the issue, the activity of the general should not relax: "the prime quality of a warrior is that he should let neither victors nor vanquished rest."

§ 4. WAR AND POLICY

We have studied how combat, battle, and major operations were evolved and conducted; we know approximately the instrument placed at the disposal of political powers to enable them to obtain by force the result which they were unable to attain by negotiation. It remains for us to state in a few words what, from the point of view of war, are the reciprocal duties of political and military authorities.

Strictly speaking, the political authority has no duties as such to the military authority; it can dispose of it according to its fancy, but it is answerable to the nation, and has the very clear duty of acting in conjunction with the military authority in the manner that most conforms to national interest.

The Government of Napoleon III., and particularly that of the Regency which preceded September 4, incurred no more terrible responsibility than that of interfering with the leadership of the armies. The rights of a government over its generals, and the limitation of these rights, are determined by national interest.

It is the right and the duty of a government to indicate to a general the object of the military operations and to cashier the leaders who show

themselves unworthy or incapable of command. This last measure is often the only one by means of which it is expedient that a government should influence operations. It is the strictest duty of the political authority not to engage in a foolish war without hope of victory—that is to say, without hope of sooner or later gaining the superiority. There is no exception save in cases of desperation, when it is known that a nation is doomed, and nothing remains but to sell life dearly to save honour. The general is aware of this and acts accordingly. In all other cases it is a crime to make war without being certain of superiority.

Can a war undertaken with serious chances of success have a more or less limited object? Is it possible to fix a restricted objective for a general? Can any general propose to himself anything short of the ruin of the enemy's armies?

Up to the end of the eighteenth century the stronger of two adversaries could only attain a decision by seizing first one province, then another, and by besieging fortresses. The war dragged on, and the victor was able to abase the vanquished without destroying him by taking territory which could never be reconquered by its former owner, except through a series of distant events impossible to foresee. It was possible to assign the conquest of a province as an object of a war, knowing that the advantage obtained would never be lost, and that it would need ten years of effort and enormous expenditure to gain more.

Clausewitz still considered that war of limited

success was possible in his day, but nothing proves this opinion to be justified. At all events it no longer seems to be possible in the twentieth century for European wars. Japan was able to make war on Russia, in order to lay hands on Manchuria and nothing else, and obtained the desired result without putting the Russian army out of action ; the efforts necessary to either party to prolong the struggle and modify the results were out of all proportion to the interests at stake. It can never be the same in Europe : without speaking of the passions that would animate most of the belligerents, the material conditions of modern war no longer admit of avoidance of the radical decision by battle. The two armies occupying the whole area of the theatre of operations march towards each other, and there is no issue but victory. It is impossible to avoid the encounter, impossible also to seek in it but a half-success. It seems as though the distinction made by Clausewitz in the last century between an absolute offensive and an offensive with a limited objective is longer to be made, at any rate as far as European war is concerned. Therefore, the indications which a government should give to a general on the political object of war are reduced to a very small affair.

Once the war is decided on, it is absolutely necessary that a general should be left free to conduct it at his own discretion, subject to seeing himself relieved of his command if he uses his discretion with but little energy or competence. The plan of campaign should be the personal work

of the general; it has hardly ever happened that the interference of a government in the conduct of operations has produced happy results. The action of the Committee of Public Safety was successful because Carnot was a professional soldier directing improvised generals. The unseasonable orders of the famous Aulic Council in Vienna during the wars of the Revolution are well known. We know too how MacMahon was sent from Chalons to Sedan with his army; how the mistaken manœuvres of Loigny and Beaune-la-Rolande were ordered. And quite lately we have seen the trouble brought on the operations of General Kuropatkin by superior orders.

Napoleon is very clear on this subject.

Every general who undertakes to carry out a plan which he thinks bad and disastrous is a criminal; he must make representations, and insist that it be changed, and in the end hand in his resignation sooner than be instrumental in the ruin of his own men.

Faithful to this principle, Napoleon offered to resign in May 1796, sooner than execute an absurd plan of the Directorate, and in 1800, being unable to make Moreau understand the advantages of an admirable plan he was recommending to him, he did not insist that he should execute it.

Jomini, brought up in Napoleon's school, opines that the political authority has no right to intervene until the success of a campaign has been decided. The expression is not correct: the political authority has every right, but it would commit a blunder in imposing its manner of view-

ing the situation on a general who was in charge of the operations.

The campaign of 1813 presents to us the most singular and unexpected of examples—the political authority and the military authority united in a single man; the first exercising a fatal influence over the second. Napoleon several times expresses the opinion that it is necessary to march to Berlin and crush Bernadotte before attacking Blücher; but he hangs on to Dresden, by the political importance of which he is obsessed.

The differences that arose between Bismarck and Moltke under the walls of Paris are often spoken of: the politician demanded, insisted, on the bombardment; the general wished to carry on regular operations. It hardly seems possible to justify Bismarck's pretensions; he might have said of what importance the capture of Paris was to him, or given orders that they should make that their business, rather than the gaining of victories over the armies of the provinces; but there his rôle ended. Professional soldiers, here represented by Moltke, alone knew by what means that object could be attained, what chance of success a bombardment offered, what inconveniences it would entail in case of failure.

It is not only the intervention of governments that is to be feared; it is above all the intervention of peoples. This is due to thoughtless passions, and in consequence is usually unreasonable. It imposes unseasonable battles and shameful capitulations.

The numerous and passionate proletariats of

great capitals send armies to their ruin, and above all, it is in their name that armies are sent to their ruin; in their name that a Napoleon III. is obliged to remain on the frontier with 240,000 men against 500,000; that a MacMahon is forced to hurl himself into the abyss.

Though the populace does not always impose such disastrous operations, it always assigns an exaggerated importance to the capital. Sometimes, as in 1870-1, it becomes the object of active operations, distracting the attention of generals from what ought to be their only care—victory in the field; sometimes it obliges them to give battle before a capital, instead of postponing the decision.

Far from provoking or exploiting the populace, the duty of political authorities is to pacify, and, if necessary, to suppress popular movements. Once war has begun, the general entrusted with command and possessing the confidence of the nation should act in all freedom. The government should not only respect, but it should assure, this freedom of military action.

It is not by intervening in the operations of a war, but in prosecuting on parallel lines the operations of policy that success is made attainable. The more restricted armies are in their theatre of operations, the more difficult do decisive manœuvres become, and thus great results become due to interventions and the overthrow of alliances. Diplomatic action is more important than ever.

CONCLUSION

We should not study the science of war save to discover, if not the secret of victory, at any rate the causes that contribute to success or defeat. All our studies and researches would be vain if they did not lead to some conclusions on this subject. We must not, however, expect them to be very precise or formal. An infinite variety of elements comes into play in war; some are altogether material, while others are of a moral or intellectual order. Sometimes one element, sometimes another, gains the advantage, as the case may be. When armies of the same value, commanded by good generals, are facing each other, it is numbers—the material element—which is the deciding factor. It is again the deciding factor when numerical superiority is such that the genius of a Napoleon would not suffice to re-establish the balance.

On the other hand, there are circumstances in which the superiority of strength, discipline, instruction, and command is so great that numbers lose all their weight. This is the case in most colonial wars; it was also the case when the troops of the Directorate fought those of Naples.

The army of a civilised nation has the advantage over the army of a savage people; but, if the latter makes a little progress, procures improved arms, begins to discipline and organise its troops, it thenceforward adds to the advantages of civilisation a vigour, a fanaticism, a contempt for death which gives it superiority and enables it to obtain an easy victory over an army which has but the military form and not the warlike spirit. It is thus that the Teutons, the Arabs, the Mongolians, who, though still barbarians, were organised and disciplined and keen in the fight, were easily able to bring about the ruin of decrepit empires. To give a modern example, a French company would beat 2,000 negroes; but a battalion of Turcos is worth several battalions of European reservists.

There is no hierarchy among the elements of war; one cannot pretend that one is more important than another. One day Napoleon said, "Victory is to the big battalions"; the next day he declared that "in an army the men don't count," that "one man is everything." Genius triumphed over numbers at Dresden, and succumbed at Leipzig.

But in spite of these contradictory statements a study of the causes of victory will not be absolutely sterile. The first object of such a study should be the material element, because it is the easiest to deal with.

Superiority in armament is unquestionably of importance, especially when it is very great. It assures the success of European troops against

Africans armed with spears and old muskets. When the superiority is slight, it gives but small advantage. It was not the needle-gun that carried the day at Sadowa, it was the infantry that handled it—the same infantry that fought victoriously at Mars la Tour against the *chassepôt*, a better weapon than the needle-gun. We should not be negligent about adopting the most perfect arms, but we must not rely too exclusively on them for victory. Numerical superiority in artillery is more important than superiority of armament. "One must have as much artillery as one's enemy," said Napoleon; "one should reckon four guns to every 1,000 men. It is with artillery that one makes war."

A plentiful supply of munitions of war and provisions of all sorts, and especially of the *matériel* necessary to transport and communications, exercises a great, and too often ignored, influence on the issue of battles and of a whole war.

Superiority in cavalry is of vital importance. It alone makes a decisive victory possible and enables us to check the successes of the enemy. It saved the Allies in the first campaign of 1813, and also gave them their terrible revenge at Leipzig. It will not play a lesser part in the war of the future.

A cavalry division numbers about as many men as a regiment of infantry. It is the equivalent of the *personnel* of twenty batteries. However preponderant the rôle of infantry, taken as a whole, we must not forget that in an army of

500,000 or 1,500,000 men a regiment of infantry is of quite inferior importance to a division of cavalry, or to twenty batteries.

Therefore, so long as the artillery does not come up to the proportion of four guns to every 1,000 men, so long as it is possible to create squadrons (a matter of horses and money), and so long as it seems desirable to endow the army with more plentiful means of communication, there is a great advantage in doing so. By diminishing to a slight extent the numbers of infantry, we may increase our chances of success.

"Superiority of numbers," said Clausewitz, "is the most usual means of victory. It is the most important when it is great enough to neutralise all the rest."

However bad troops may be, they are never useless, and numbers, if only they are great enough, will give them the advantage. The fights and battles of the second part of the war of 1870-1 seem to demonstrate that troops without any military training, and of which even the cadres are improvised, can gain the advantage over seasoned and well-commanded troops if they fight at odds three or four to one. Sixty-five thousand Frenchmen beat twenty thousand Germans at Coulmiers. At Loigny, Beaune-la-Rolande, and at le Mans the French had superior numbers, but not a sufficiently marked superiority to win.

We also see that the quality of troops exercises a great influence, since it balances a numerical superiority of two to one, and sometimes more. It need not be stated that the most seasoned troops

are the best. In the absence of experience of fighting, it is cohesion, mutual confidence, the habit of common life, military training, and education, and, above all, the officers and non-commissioned officers that impart value to troops. Then come the sentiments and passions which animate the army. The best troops are national recruits, when they are animated by keen patriotism, and are well officered and trained. Next to them come professional troops, soldiers by taste and trade. The worst troops are militia, who serve against their will, and are destitute of all training.

But there are no troops so bad that good generals cannot fire them. Perhaps the value of the leader outclasses all other elements. There are no physical, intellectual, or moral qualities which are not useful to a general. He cannot have too many: some of them are essential, and among these, in the first rank, are spirit, resolution, intelligence, imagination. We know what that spirit is which inspires vigorous attacks and pitiless pursuits; according to Bonaparte, it is the first quality of a great general. Let us remember the last wars; defeat was always caused by a lack of spirit and activity, by the torpor and inertia of the general: Benedek waiting at Königgrätz to be enveloped by the Prussians; Napoleon III. and Bazaine motionless on the frontier, inert before Metz; the Boers incapable of taking the offensive and of giving the English blow for blow; Kuropatkin leaving the initiative to the Japanese. In short, there is no quality more precious in a general than activity, keenness,

the offensive spirit; no fault more fatal than inertia.

Resolution is a very special quality; it seems to be compounded of courage and intelligence—in reality it cannot exist without one and the other; but one often sees men who are very courageous in a fight and of high order of intelligence, in whom resolution, the faculty of command, is absolutely wanting. Such was Marshal Canrobert; admirable under fire, excellent in council, yet incapable of commanding an army corps on the battlefield. Resolution is the special faculty which enables a man born to command to take his decision on a full knowledge of the situation and yet without perplexity—that is to say, making a rapid calculation on the known factors and inferring the remainder, he is able then to act without *arrière pensée*, without vague fears of mysterious dangers.

Resolution not only predicates lucid intelligence and energy; it also requires imagination and originality. "A general never knows anything for certain," said Napoleon: "never sees his enemy plainly, never knows positively where he is. It is with the eyes of the spirit, by the sum total of his reasoning, by a sort of inspiration, that the general sees, knows, and judges."

On the one side he imagines what the enemy can do; on the other, he imagines unexpected operations by means of which he can prosecute his offensive. Repulsed before Caldiero, he marches by Verona and Ronco to Arcola. Seeing Masséna blockaded in Genoa, the idea occurs to him of

making an army cross the St. Bernard. A plan like that of 1815 presupposes the most fertile imagination and the most powerful mind.

These are the most precious natural gifts a general can have, but they alone will not suffice, and science must fecundate them in order to produce an art. It is not always necessary to acquire this science by intense and prolonged individual application ; if Napoleon was obliged by his genius and his studies to build up his own doctrine and method, the greater number of generals have found theirs already formulated and applied by the preceding generation.

Patriotic passion seems to hold a very secondary place among the elements we have just enumerated ; we have seen it intervening among the moral forces, taking rank after cohesion and discipline, and balancing a feeble numerical superiority. And yet it is one of the principal factors in procuring success. On it in reality the other elements of victory depend. Without sincere patriotism of a good stamp, more deep than noisy, young men would never voluntarily submit to the servitude of a military training. The army would have neither cohesion nor discipline, *there would be no way of recruiting the corps of officers.* If a keen spirit of patriotism does not animate the nation, the officers themselves would not be enthusiastic about their profession ; they would accomplish their daily tasks like hirelings, they would not have in their hearts that passion of which all offensive spirit and all initiative is born.

It is also necessary that a nation should be

animated by a profound and sober patriotism so that it may treat seriously all that concerns war. As we have said, the quality and the abundance of the material are certainly not the most important means of victory, but they are very definite symptoms of the sentiment which inspires a nation. Superficial patriotism is satisfied with appearances, and, when the moment comes, finds but an insufficient and irrational organisation.

When a nation thinks of and prepares itself seriously for war with the intention of winning, it gives a free course to the study of war. It places formalism and academic writings among the last of its preoccupations. Knowledge of the great principles of war and of the methods practised by the great leaders are then familiar to all generals and, above all, the feelings which inspire them predispose them to practise sound strategy. The nation whose spirit animates them possesses a group of leaders in which it can confide. When the hour of battle comes, the nation can do without a special genius, for its cadres will always be filled by energetic, intelligent, and soundly educated men.

Finally, another most essential thing is that a patriotic people does not choose its generals in the ante-chamber or the club. They do not raise to high command a Soubise or a Villeroi, but a Hoche, a Bonaparte.

Thus patriotism, which at first sight seemed to exert so insignificant an influence on success, is found in the last analysis to dominate everything. It is patriotism that builds up and animates

armies, trains the officer corps, causes leaders to arise. Where patriotism is beginning to die in a nation, that nation has but the semblance of a military force ; it maintains a more or less brilliant façade which will crumble at the first shock.

"There are," said Montesquieu, "general causes which operate in each monarchy, raising it, maintaining it, overthrowing it ; all accidents are subjected to causes, and if the hazard of a battle, that is to say, of a particular cause, has ruined a State, there was a general cause which ordained that that State should perish through a single battle."

Montesquieu does not name the cause, but we know it : it is the decline of national feeling.

INDEX

Administration, modern requirements in, 218
American Civil War, battles and leaders of the, 136, 137
Ammunition, expenditure of, 98
Armament, influence on war of progress in, 322
Artillery, proportion of, to other arms, 25; growing importance of, 26; French and German, in 1870, 37; effect of superiority in, 71; initial action of, in a fight, 90, 91; Napoleon's employment of massed, 132
Artillery Fire, Japanese instructions on, 48; effect of long-range, 66
Austro-Prussian War, the tactics of the, 140 *et seq.*
Aviation as an aid to exploration, 330

Battle, duration of a, 98; nature of a, 105; probable number of men used in future, 164; object and results of, 173 *et seq.*, 190; factors governing duration of a modern, 178 *et seq.*
Battle Formations, Greek and Roman, 4 *et seq.*
Bayonet Charge, time for the, 93, 94
Broglie, Maréchal de, his system of column formation, 21; his tactics, 112, 113

Cæsar, his methods of warfare, 193
Carnot, L. H. M., his ideas of warfare, 222 *et seq.*
Casualties, percentage of, 98; at Liao-yang, 148; in various battles, 176, 177
Cavalry, opening of its era, 9 *et seq.*; its rôle on the flanks, 108; Napoleon's use of, 132; general use of, in battle, 159 *et seq.*; essentially a pursuing arm, 159; Napoleon's estimate of, 160; charges of, when feasible, *ibid.*; dismounted action of, 162; its screening duties, 170
Chastellux, Chevalier de, on extension to the flanks, 209
Clausewitz, Gen. von, on the defensive, 71; his influence on German thought, 297, 304; on economy of forces, 334
Cold Steel the decisive factor in war, 56
Colenso, number of Boers per kilometre of front at, 61
Column Formation, Folard's proposed, 20; Broglie's ideas on, 21; Napoleon's battles not generally fought in, 131
Combat, general principles of the, 67 *et seq.*
Command, unity of, an essential condition, 234 *et seq.*
Communications, influence on war of progress in means of, 322 *et seq.*
Concealment, necessity for, on the battlefield, 49
Concentration, necessity of facilities for, 211 *et seq.*; essential to success in battle, 230 *et seq.*, 240; meaning of, 243 *et seq.*; German system of, 318 *et seq.*

Condé, Prince de, his methods of warfare, 194
Cordon System, the, 210 *et seq.*

Defensive, use of the, in the Transvaal and in Manchuria, 61 *et seq.*; Napoleon's use of the, 289
Dumouriez, Gen., his system of tactics, 113, 114

Economy of Forces, 237 *et seq.*; Clausewitz on, 334
Encounter Battles probably the rule in future wars, 172
Entrenchments, Russian and Boer form of, 61; requirements as to, 99; modern necessity of extensive, 158
Exploration, the service of, 269 *et seq.*; Moltke's principles of, 308; facilitated by aviation, 330
Extended Order, introduction of, 28
Extension, moral value of, 82 *et seq.*; dangers of unduly wide, 210

Fear, as a factor in war, 74 *et seq.*, 94; remedies for, 77 *et seq.*
Feuquières, Marquis de, his definition of battle, 189
Firearms, introduction and evolution of, 12 *et seq.*; original objection to, 17
Fire Effect, importance of, 27; its moral value, 46
Fire Superiority, recognition of value of, 17; Moltke on, 32; Napoleon on, 69; not obtained by thickening firing lines, 84
Flank Attack, objects of the, 121 *et seq.*; present value of, 166
Flanking Movements, examples of, from ancient and mediæval history, 106, 107
Folard, Chevalier de, his ideas on tactics, 20
Fontenoy, English infantry at, 68
Forces, economy of, 237 *et seq.*; Clausewitz on, 334
Formations, rigid, the cause of French want of success in 1870, 38
Fortresses, influence of, in early wars, 203
Franco-German War, the tactics of the, 142 *et seq.*
Frederick the Great, on tactics, 17, 18, 19; use of artillery by, 25; his practice of manœuvring on the battlefield, 109; examples from the Seven Years' War, 110; tactical methods employed by, 168; analysis of his methods, 195
Freedom of Action essential to generals, 343
French Artillery in 1870, 37
Friedland, an example of a frontal attack successful through the effect of artillery fire, 26; Russian artillery at, 68
Front, effect of a wide, 51; gradual growth of length of, 64, 65; extension of, in the wars of Napoleon, 115; narrow extent of, at Sedan, 142; extension of, 241 *et seq.*; extent of, on the Sha-ho, 152; advantage of a continuous, 157; possible extent of, in future wars, 164
Frontal Attack, not generally decisive, 6; dangers of, 34; alone rarely successful, 41, 62, 63, 70, 71; its proper application, 73; difficulties of, exemplified in 1870, 145; failure of, at Liao Yang, 149

German Artillery, in 1870, 37; tactics of, 40
Goltz, Gen. von der, on unwieldiness of modern armies, 326
Grandmaison, Comte de, on infantry training, 67; on fear, 75
Groups, the use of, 84 *et seq.*
Guibert, J. A. H., on outflanking movements, 111 *et seq.*; on the defensive, 209
Gunpowder, its influence on war, 13
Guns, Napoleon on value of regimental, 25; introduction of rifled, 28; use of heavy, in Manchuria, 50

Heusch, Gen. de, on advantage of well-concealed artillery, 51

Home, Major, on effect of modern artillery, 52

Improvised Armies, French, in 1870, 145
Infantry, augmentation in the number of, 15; the decisive weapon, 67, 68; action of, in Franco-German war, 85, 86
Infantry Fire, importance of, 27
Infantry Tactics, in 1859, 28; in 1866, 29

Japanese, the, in Manchuria, temper determination with discretion, 57
Jena, Napoleon's orders for the battle of, 131; analysis of Napoleon's tactics at, 265 *et seq.*
Jomini, Gen. Baron de, on the science of marches, 249

Kessler, Gen., on tactics, 45
Kuroki, Gen., at Liao Yang, 146 *et seq.*; his bold measures, 149

Leaders, influence of, in military operations, 85 *et seq.*, 136, 137, 172, 179, 180, 182 *et seq.*; necessity of having good junior, 101
Leroy de Bosroger on outflanking movements, 112
Liao Yang, analysis of battle of, 146 *et seq.*
Liberty of Action, requirements as to, 285
Light Troops, early employment of, 4
Linear Deployment, adoption of, 16
Lines of Communication, present importance of, 324
Loeffler, Major, on tactics in Manchuria, 57

Machine Guns, use of, in Manchuria, 50
Magenta a battle in true Napoleonic style, 136
Magersfontein, number of Boers per kilometre of front, 61
Manchuria, artillery tactics in the war in, 48; infantry tactics in, 54 *et seq.*; use of the defensive in, 61 *et seq.*
Manœuvre, decisive of victory, 7; advantages of power of, 109, 110; Napoleon's ideal, 124; on a central position, 291; Moltke's system of, 310 *et seq.*
Marathon, battle of, as an example of outflanking, 106
March Strategy, Moltke's, 303 *et seq.*
Marches, the science of, 249
Mauvillon, J., on outflanking movements, 111 *et seq.*
Missile Weapons, 1; contempt of the ancients for, 2; more general adoption of, 10
Mobilisation, German system of, 317 *et seq.*
Modder River, number of Boers at, per kilometre of front, 61
Moltke, F.-M. Count von, on fire superiority, 32; on the defensive, 71; difference between Moltke's tactics and those of Napoleon, 137, 138; march strategy of, 330 *et seq.*; principles of exploration, 308; system of manœuvre, 310 *et seq.*
Moral, the factor of, in war, 72, 182 *et seq.*
Moreau, Gen., mistakes made by, at Neresheim, 114
Mukden, analysis of battle of, 154 *et seq.*

Napoleon I., reasons for curbing the initiative of his subordinates, 23; on value of regimental guns, 25; of artillery, 26; on fire effect, 69; his ideas in forming a supporting rank, 80; on entrenchments, 99; his first battle, 117; importance attached by, to turning movements, 119 *et seq.*; his ideal manœuvre, 124; his resourcefulness, 127 *et seq.*; his battles not generally fought in deep formation, 131; his tactical methods, 156; his views on the action of a commander in battle, 183; methods modified in modern war, 226; principles of Napoleonic war, 228 *et seq.*;

recourse by, to speed and secrecy in movement, 250 *et seq.*; views on the offensive, 335, 340; his insistence on freedom of action, 344 *passim*
Négrier, Gen. de, on tactics, 42; on invisibility of artillery, 50; on employment of small groups, 88; on the necessity of independent action by groups, 93
Neresheim, Moreau's faulty dispositions at, 114
Ney, Marshal, his mistake at Friedland, 23
Night Operations, diverging views of British and Japanese on, 59
Numbers, effect of, 71

Oblique Order, the, of Frederick the Great, 18, 19
Offensive, the advantages of the, 33; Napoleon's preference for the, 133; against a single enemy, 278 *et seq.*; absolute necessity of the, 335 *et seq.*
Outflanking Movements at Liao Yang, 149
Outposts, varying systems of, 217
Oyama, F.-M., on the Sha-ho, 151; at Mukden, 155 *et seq.*

Phalanx, nature and use of the, 4 *et seq.*
Picq, Ardant du, on fear, 74, 75, 77, 79, 81, 87
Plevna, Russian tactics before, 43
Policy and War, 341 *et seq.*
Position, importance of, 33; necessity of having a strong, 171; manœuvre on a central, 291
Principles, application of old-established, 331 *et seq.*
Protection, objects and methods of, 274 *et seq.*
Prussian Cavalry under Frederick the Great, 110
Prussian Troops, their facility of manœuvre, 109
Psychological Factors, 74 *et seq.* 101
Pursuit, Napoleon's estimate of the value of the, 133; importance of, 173; at Eylau and at Austerlitz contrasted, 175

Railways, present effectiveness of, 328
Ranging, benefits of accurate, 51
Reconnaissance now a prolonged process, 66
Reinforcements, gradual absorption of, in firing line, 89
Reports, value of early, of hostile movements, 144
Reserves, absorption of, into firing line, 29; Japanese formation of, 59; faulty position of Russian, on the Sha-ho, 151; judicious use of, 169
Rivers in a defensive scheme, 289
Roberts, Lord, on quality of British soldiers, 55

Secrecy, advantage of, 250 *et seq.*
Sha-ho, analysis of the battle on the, 150 *et seq.*
Skill, value of technical, in war, 72
Skirmishers, the revival of, 22
Speed, advantage of, in movements, 250 *et seq.*
Stackelberg, Gen., on the Sha-ho, 150
Staff, duties of chief of the, 218
Supply, methods of, in earlier war, 201 *et seq.*; in modern war, 218
Supports, moral value of, 80 *et seq.*

Tactics, adoption of linear, 16 *et seq.*; French, in the eighteenth century, 19 *et seq.*; Wellington's, in Spain, 24; Prussian, in 1870, 38; French, in 1870, 39, 40; artillery, 40, 44; French views on, in 1875, 41; Russian, before Plevna, 43; artillery, in the Transvaal War, 46; artillery, in Manchuria, 48; Japanese artillery, 50 *et seq.*; infantry defensive, 61 *et seq.*; difference between Moltke's and Napoleon's, 137, 138; of the Austro-Prussian war, 140 *et seq.*; of the Franco-German war, 142 *et seq.*; Napoleon's conception of grand, 259 *et seq.*
Telegraphy and Telephony, extended use of, 329

Transport in concentration areas, 319
Transvaal War, artillery tactics in the, 46 ; infantry tactics in the, 53 *et seq.* ; use of the defensive in the, 61 *et seq.*
Turning Movements, the increasing wideness of, necessitated by improvements in weapons, 111 ; importance attached to, by Napoleon shown by examples, 119 *et seq.*

Victory, elements essential to, 347 *et seq.*

War and Policy, 341 *et seq.*
Warfare, causes affecting nature of, 1 ; changing conditions of, 64 *et seq.* ; in Cæsar's days, 193 ; causes of protraction of former, 197 *et seq.* ; elements of ancient, 200 *et seq.* ; origin of modern system of, 207 *et seq.* ; details of modern, 214 *et seq.* ; character of modern, 220 *et seq.*
Wattignies, Jourdan's action at, 114
Weapons, influence of, on war, 199, 200, 322
Wellington, Duke of, his tactics in Spain, 24
Will, influence of superior, 6
Wire Entanglements, use of, in defence, 62

PRINTED BY
HAZELL, WATSON AND VINEY, LD.,
LONDON AND AYLESBURY.

OTHER VOLUMES

OF THE

PALL MALL MILITARY SERIES

PUBLISHED BY

HUGH REES, LIMITED,

5, REGENT STREET, S.W.

THE ELEMENTS OF STRATEGY.

By the late Lieut.-Colonel TOVEY, R.E., Instructor in Military History, Strategy, and Tactics at the School of Military Engineering, Chatham. New Edition, revised and edited by T. MILLER MAGUIRE, M.A., LL.D., Inner Temple, Barrister-at-Law. Demy 8vo 221 pages. With 11 Maps and Plans. Price 6*s.* net.

LETTERS ON APPLIED TACTICS.

Tactical Exercises dealing with the operations of small detached forces of the three arms. With numerous examples of actual orders worked out by Colonel GRIEPENKERL, translated and modified in accordance with English organisation by KARL VON DONAT. Demy 8vo. With 4 large Maps in pocket. Sixth Edition, revised. Price 8*s.* 6*d.* net.

The late Viscount SOROKU KAWAKAMI, Head of the Imperial Japanese General Staff, writes in the preface to the Japanese Edition of this book: "I am of opinion that this work outlines the principles of Tactics remarkably well, not merely from a theoretical point of view, but in accordance with practical requirements and in strict conformity with the most up-to-date regulations on the subject. I consider the book indispensable to the coming generation of officers."

THE "PEOPLE'S WAR" IN FRANCE, 1870–1871.

By Colonel Lonsdale Hale. Demy 8vo. 284 pages. With 2 Maps. Price 6*s.* net.

"The publishers have been fortunate to enlist the services of one so well acquainted, as is Colonel Lonsdale Hale, with the battlefields of modern Europe and the literature of the subject. He deals with that phase of the Franco-German War which succeeded the fall of Sedan, and shows that it so differed from what had gone before in the problems it presented that it is entitled to distinct and independent treatment."—*Scotsman.*

CAVALRY IN ACTION IN THE WARS OF THE FUTURE.

Studies in Applied Tactics. Translated from the French by J. Formby, Lieut-Colonel 3rd Vol. Batt. The King's (Liverpool) Regiment. With a Preface by Lieut.-General Sir J. D. P. French, K.C.B. Demy 8vo. 271 pages. With 12 Maps and Plans. Price 6*s.* net.

"Cavalry soldiers would do well to study this useful and instructive book."—*Preface* by Sir John French.

THE DEVELOPMENT OF STRATEGICAL SCIENCE DURING THE 19TH CENTURY

By Lieut.-General v. Caemmerer. Authorised Translation by Karl von Donat. Demy 8vo. 277 pages. Price 7*s.* 6*d.* net.

"The evolution of the principles of Strategy—as marked, for instance, by the works of Jomini. Clausewitz, and von Moltke—is worked out with an admirable regard for essentials, in clear and precise language."—*Manchester Guardian.*

THE NATION IN ARMS.

By Lieut.-General Baron VON DER GOLTZ. Demy 8vo. 475 pages. New and revised Edition. Price 7*s.* 6*d.* net.

"The work is full of interest from beginning to end, and must always be one of the World's military classics. It repays earnest study alike of statesmen and soldiers."—*Journal of United States Artillery.*

BUSH WARFARE.

By Lieut.-Colonel W. C. G. HENEKER, D.S.O., Connaught Rangers. Demy 8vo. 203 pages. 13 Maps and Plans. Price 6*s.* net.

"His volume is full of instruction, and we would commend it to all soldiers, because the British Army has done, and probably will have to do, more bush fighting than any other army in the world."—*Army and Navy Gazette.*

CAVALRY ON SERVICE.

Illustrated by the advance of the German Cavalry across the Mosel in 1870. Translated from the German of General v. PELET-NARBONNE by Major D'A. LEGARD, 17th Lancers. Demy 8vo. 350 pages. With 13 Maps. Price 7*s.* 6*d.* net.

"Rarely, if ever, has so complete and useful a compendium of the actual leadership of troopers in the field seen the light of publication. It affords thousands of object lessons, and should be read by every keen horseman, regular, or yeoman."—*Daily Telegraph.*

THE EVOLUTION OF TACTICS.

By Major GERALD GILBERT (Indian Army). Demy 8vo. 193 pages. With 23 Maps and Plans. Price 7*s.* 6*d.* net.

"This suggestive book is one that deserves to be read by any army officer. It would be difficult to find in as compact a form as his so many lucid descriptions of the victorious devices which originated in the fertile brains of great commanders."—*Manchester Guardian.*

CAVALRY STUDIES: STRATEGICAL AND TACTICAL.

By Maj.-General Douglas Haig, C.V.O., late Inspector-General of Cavalry in India. Demy 8vo 333 pages. With 38 Maps and Plans. Price 8*s.* 6*d.* net.

"The descriptions of the operations are wonderfully fascinating, the strategical and tactical 'appreciations' masterly and illuminating, and the orders issued are patterns of their kind."—*Westminster Gazette.*

SADOWA: A STUDY.

By General H. Bonnal Translated from the French by C. F. Atkinson, Lieutenant 1st V.B. Royal Fusiliers (City of London Regiment). Demy 8vo. 255 pages. With 21 Maps and Plans. Price 7*s.* 6*d.* net.

MILITARY HISTORY APPLIED TO MODERN WARFARE.

By the late Captain J. W. E. Donaldson, R.F.A. Second Edition, revised and enlarged by Captain A. F. Becke, late R.F.A. Demy 8vo. 395 pages. With 15 Maps and Plans. Price 8*s.* 6*d.* net.

"As a guide to the study of military history the book has a definite sphere of usefulness. It deals specially with the campaigns of Austerlitz, Jena, Vimiero, Corunna, Salamanca, Waterloo, and the Shenandoah Valley. Ample illustration of the points discussed is provided by an excellent series of maps."—*Scotsman.*

GRANT'S CAMPAIGN, 1864–5. (The Wilderness and Cold Harbor.)

By C. F. Atkinson, Lieut. 1st. V.B. Royal Fusiliers (City of London Regt.). Demy 8vo. With 24 Maps and Plans. xii + 466 pp. Price 7*s.* 6*d.* net.

"Long before reaching the end of the introductory chapter of this admirable contribution to the literature of the American Civil War the reader will certainly have realised that the book in his hands is one of quite uncommon merit. The author writes with the power that belongs only to those who, in addition to wide knowledge of facts, have also a thorough understanding of the exact bearing of each and all in reference to the various issues that have been influenced or decided by them."—*Westminster Gazette.*

CAVALRY IN WAR AND PEACE.

By General Freiherr von Bernhardi. Translated from the German by Major G. T. M. Bridges, D.S.O., 4th (Royal Irish) Dragoon Guards. With a preface by General Sir J. D. P. French, G.C.B., G.C.V.O., K.C.M.G. Demy 8vo. xxxii + 368 pp. Price 7*s.* 6*d.* net.

"He writes with a breadth of view and a freshness which deservedly earn for him the praise of our own great cavalry leader, Sir John French."—*Standard.*

THE JAPANESE IN MANCHURIA, 1904

By Colonel E. L. V. Cordonnier (French Army). Translated by Captain C. F. Atkinson. Vol. I.—The Yalu and Telissu. 281 pages. With 12 Maps. Price 7*s.* 6*d.* net.

"The book is noticeably lucid in its account of highly complex movements, and has an admirable series of maps"—*Scotsman.*

PROTECTION IN WAR.

By Major-General F. J. Aylmer, V.C. 478 pages. With 17 Plans. Price 7*s.* 6*d.* net

"General Aylmer writes with the vigour and concentration of one who has thought out his subject thoroughly and knows how to bring essentials into their proper setting."—*Spectator.*

STONEWALL JACKSON'S VALLEY CAMPAIGN

From November 4th, 1861, to June 17th, 1862.

By William Allan, formerly Lieut.-Colonel Army of Northern Virginia. With 8 Maps. New Edition. Price 6*s.* net.

"As remarkable for research and accuracy as for military acumen."—Colonel G. F. R. Henderson.

RETURN TO ➡ CIRCULATION DEPARTMENT
202 Main Library

LOAN PERIOD 1 HOME USE	2	3
4	5	6

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

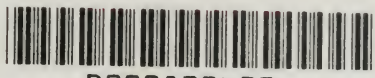
Library loans may be renewed by calling 642-3405
Library loans may be recharged by bringing the books to the Circulation Desk
Renewals and recharges may be made 4 days prior to due date

DUE AS STAMPED BELOW

JUN 29 1985	AUG 22 1995	
Returned by		
JUN 5 1985	JUN 29 2004	
Santa Cruz Jitney		
RECEIVED BY	APR 10 2005	
JUN 12 1985		
RCULATION DEPT.		
APR 22 1987		
AUTO. DISC. APR 23	'87	

UNIVERSITY OF CALIFORNIA, BERKELEY
FORM NO. DD6, 60m, 1/83 BERKELEY, CA 94720

GENERAL LIBRARY - U.C. BERKELEY



B000820492

304716

UNIVERSITY OF CALIFORNIA LIBRARY